

# JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

THIRD SERIES

VOL. 41. No. 14

2 JUNE 1934

## CONTENTS FOR 2 JUNE 1934

	Page
CHARTERHOUSE. P. C. Hardwick .. .. .	<i>Frontispiece</i>
JOURNAL .. .. .	727
THE ENGLISH PUBLIC SCHOOL PLAN. W. G. Newton [F.] .. .. .	729
VOTE OF THANKS AND DISCUSSION .. .. .	742
JEWISH ARCHITECTURE IN POLAND. Professor G. Lukomski .. .. .	743
HERTFORD COUNTY HOSPITAL .. .. .	754
HOUSE AT KIDDERMINSTER .. .. .	758
REVIEW OF CONSTRUCTION AND MATERIALS .. .. .	760
REVIEWS:	
PROFESSOR FRANK GRANGER'S TRANSLATION OF THE "DE ARCHITECTURA" OF VITRUVIUS. F. R. Hiorns [F.] .. .. .	763
MODERN PUBLIC HOUSE. Sir John Sykes, K.C.B. .. .. .	765
ADVISORY PAMPHLETS ON MATERIALS AND DESIGN. S. C. Ramsey [F.] .. .. .	766
ACCESSIONS TO THE LIBRARY .. .. .	767
REVIEW OF PERIODICALS .. .. .	768
OBITUARY:	
CASS GILBERT. Hon. Corps. Member .. .. .	770
NOTES .. .. .	770
SCHOOL NOTES .. .. .	771
MEMBERSHIP LISTS .. .. .	772
NOTICES .. .. .	774
COMPETITIONS .. .. .	775
MEMBERS' COLUMN .. .. .	776
MINUTES XIII .. .. .	776
ARCHITECTS' BENEVOLENT SOCIETY .. .. .	776



CHARTERHOUSE

Built by P. C. Hardwick in 1872  
from a drawing by Hardwick in the R.I.B.A. Library

R  
—  
VO  
—

T  
at  
cal  
edu  
qui  
gen  
Mo  
rec

T  
an  
aut  
hal  
J  
con  
the  
to e

T  
the  
one  
as f  
to l  
Stre  
was  
Inst  
visi  
R.I

I  
the  
chie  
Yor  
the  
the  
beir  
min  
Lea  
Aca  
Arc

# JOURNAL OF THE ROYAL INSTITUTE *of* BRITISH ARCHITECTS

VOL. 41. 3RD SERIES

2 JUNE 1934

No. 14

## Journal

The Architects Registration Act, 1931, provided that at least one-half of the total fees receivable in each calendar year should be devoted to architectural education: but the Act did not provide the funds required for offices, registries, files, legal assistance and general outlays necessary for establishing the Register. Moreover, during the first year, 1932, no fees were receivable.

The Council were accordingly obliged to borrow and an Amending Bill is at present before Parliament to authorise them to use, for the purposes of repayment, the half of the fees referred to above accruing up to the 1 January 1935. As soon as the educational schemes contemplated under the Act have matured the half of the fees above referred to being available will be devoted to education, as laid down in the present Act.

The death of Mr. Cass Gilbert removes the senior of the R.I.B.A.'s Honorary Corresponding Members and one whose association with English architects dates from as far back as 1880 when, as a young man, he first came to England and met the leading architects of the day, Street, and Waterhouse and Pearson and Burges. He was elected an Honorary Corresponding Member of the Institute in 1906, and many members will remember his visit to London in 1920, when he was the guest of the R.I.B.A. Council.

In range and versatility Mr. Cass Gilbert was one of the most productive architects of his generation. Famous chiefly as the designer of the Woolworth building in New York, his extraordinary success can best be judged from the long list of his buildings in America, where before the War he had the largest practice in the United States, being successful not only as a designer but as an administrator. He was the founder of the Architectural League of New York, and President of the National Academy of Design and of the American Institute of Architects. His influence on contemporary architecture

is important because though he used modern methods and modern materials with understanding he never lost his sense of classical forms or his feeling for tradition.

We hope to publish a more detailed notice of his career in a future JOURNAL. On p. 770 of this issue we print the tributes paid to him by the President and Professor Beresford Pite.

Two interesting decisions have been taken this week concerning the planning of London. In the House of Commons on Wednesday night the motion by Sir William Davison recommending the refusal of a grant to the L.C.C. for the building of a new Waterloo Bridge was passed by 35 votes. This will mean that if the L.C.C. persists in its intention to build a new and wider Waterloo Bridge it will have to be financed entirely from L.C.C. rates. More than one speaker in the debate took the opportunity to press for a reconsideration of the Charing Cross Bridge scheme, which is, as most town planners and architects will agree, the focal point of all London planning. The other decision was taken by a Parliamentary Committee which has just refused permission to the London Passenger Transport Board to use Bedford Square as a turning point for trolley buses. This, had it been allowed, would have been a perfect example of the retrograde and piecemeal treatment of traffic problems which does so much to set back the possibility of a properly zoned London plan.

The following donations to the New Building Fund have been received since the publication of the list in the last number of the JOURNAL:

	£	s.	d.
Brought forward . . . .	10,006	9	5
Mr. J. Stanley Beard [F.] . . . .	10	10	0
The Cambridge Chapter of the Essex, Cambridge and Hertfordshire Society of Architects. (First annual donation of five, each equal to 10 per cent. of the R.I.B.A. contribution to the Chapter)	2	8	10

	£	s.	d.
Miss E. M. Charles [A.] .. .. .	5	0	0
Mr. J. Alfred Gotch [ <i>Past President</i> ] ..	25	0	0
Messrs. Heazell & Sons (A. Ernest Heazell [F.] and Edward H. Heazell [L.]) .. .. .	5	5	0
Lord Howard de Walden and Seaford [ <i>Hon. F.</i> ] .. .. .	105	0	0
Mr. C. A. Imossi [L.] .. .. .	5	5	0
Messrs. Joseph (C. S. Joseph, E. M. Joseph [A.], and F. Milton Cashmore [A.]) .. .. .	20	0	0
The Liverpool Architectural Society. (First annual donation of five, each equal to 10 per cent. of the R.I.B.A. contribution to the Society) .. .. .	13	7	5
Mr. Frank Pick [ <i>Hon. A.</i> ] .. .. .	10	10	0
Mr. G. P. Powis [L.] .. .. .	1	1	0
Messrs. Searle & Searle (Norman O. Searle [A.], L. Keir Hett [F.], and A. F. Allen [L.]) .. .. .	15	15	0
Messrs. A. Saxon Snell [F.] and Rees Phillips [F.] .. .. .	25	0	0
Mr. H. G. Speakman [A.] .. .. .	1	1	0
Mr. M. H. Spielmann [ <i>Hon. A.</i> ] .. .. .	5	5	0
Messrs. Leonard Stokes and Drysdale (George Drysdale [F.]) .. .. .	25	0	0
Mr. G. Ronald G. Topham [A.] .. .. .	1	1	0
Mr. John E. Yerbury [F.] .. .. .	5	0	0
In addition, the late Mr. Cass Gilbert (Hon. Corr. Member) promised a donation of 500 dollars.			

Total amount received or promised. £10,287 18 8

In April last the Indian Institute of Architects published the first number of its new journal, and we can wish them every success in a venture which has been so well begun. For the time being the journal will appear quarterly, but monthly publication will start as soon as sufficient support has been received to justify the change. The contents of the new Indian journal are enough to justify the launching of yet another periodical on to the uncertain architectural sea. The editors have cleverly found right balance between severely technical and professional matters and things of general interest: modern building comes in with photographs and descriptions of a large private house and a tenement building; town planning in a very suggestive article on town planning in Bombay, technique in an article on water supply, and professional affairs in notes on Bombay building regulations and in reprints of the R.I.B.A. code of conduct and the Indian Institutes note for the instruction of competition assessors. The centre part of the journal is filled as a tragic and, indeed, cynical comment on the transitoriness of architecture by pictures of the Bihar earthquake.

The photograph of William Burges at the foot of this page is published for two good reasons. First because it is a recent gift of unusual interest to the R.I.B.A. from Mr. Beresford Pite, being the only portrait of Burges that we have been able to discover after a long hunt, and secondly in order that it may be used as a peg on which to hang a request to senior members of the Institute to look through their collections and to give the R.I.B.A. Library any photographs of nineteenth century architects which they may have. The chance of an architect of time disappearing without leaving any published record of his appearance is rare now that every architectural journal publishes photographs, but in the past that was not so, and, except for the few architects who by wealth or distinction managed to get into the "portrait in oils" class, good records are few and far between. Who, for instance, can tell us where are pictures, either photographs or drawings or more pretentious "portraits," of Carpenter, architect of Lancing, Mocatta, the architect of all the early nineteenth century stations on the Brighton line; Moffatt, first assistant and later partner of Gilbert Scott; Buckler, Salvin, Teulon, the Hardwicks and the many others who are probably not known even by name to a majority of members to-day, but who in their days were in one way or another the great men of the profession? We know where portraits of some of those in the list may be found, though we have none in the library. In course of time portraits may be all that remain as the memorials of architects whose good buildings have suffered from the depredations of critical succeeding generations. Knowledge of the man is often one of the best ways of knowing his buildings, so that portraits satisfy more than idle curiosity, and are documents of real value in the proper understanding of the faiths and work of past ages.



WILLIAM BURGESS, R.A.





MERCHANT TAYLORS' SCHOOL. Built by W. G. Newton

*Architect and Building News*

## THE ENGLISH PUBLIC SCHOOL PLAN AND THE NEW MERCHANT TAYLORS' SCHOOL

BY W. G. NEWTON, M.A., F.R.I.B.A.

A PAPER READ BEFORE THE ROYAL INSTITUTE OF BRITISH ARCHITECTS ON MONDAY, 28 MAY 1934,  
THE PRESIDENT (SIR GILES GILBERT SCOTT, R.A.) IN THE CHAIR

*The President, in opening the proceedings, referred to the death of Mr. Cass Gilbert, the Senior American Hon. Corresponding Member, and called upon Mr. Beresford Pite [F.] to say a few words. The President's remarks and Mr. Beresford Pite's eulogium are printed in full in the Obituary column on p. 770. The President then presented Mr. G. A. Crockett with the medal won in joint competition on the subject of the Eustache-Rougevin prize between students of English and French Schools of Architecture. The medal was given by Mr. A. J. Davis, A.R.A. [F.].*

*Mr. H. M. Fletcher said a few words about the competition, his speech being reported on p. 746.*

### MAIN LINES OF DEVELOPMENT SINCE 1870.

The English public school is a Victorian institution. Even those of the proudest antiquity were remodelled in character and largely rebuilt during that virile and earnest period. and I strongly suspect that most of the ancient customs and taboos which tradition venerates to-day are of nineteenth century origin.

To-night, however, we are more concerned with the outward expression of their character and habits as shown in their buildings. And a study of these during the last 60 or 70 years would reveal, I think, three main lines of development: one, the ever-increasing importance of the apparatus of teaching; secondly, the growth of domestic amenity, and thirdly, the gradual breaking down of a preconceived pattern, whether of plan or external appearance, before the demands, continually more insistent, of convenience, light and air and sunshine.

It would plainly be a task beyond the scope of a

'short paper to pursue this inquiry among all the public schools of England, with all their variety of origin, history and position. In order to keep my task within bounds, I propose to confine myself mainly to the great urban schools, which came architecturally into prominence during the last half of Queen Victoria's reign; these are Dulwich, Charterhouse, St. Paul's and Christ's Hospital; and finally the Merchant Taylors' School, which made a move both at the beginning and at the end of my period.

### DULWICH

If we look, then, at Barry's plan for Dulwich, dated 1868, we see a scheme of three blocks of buildings, linked together by an open colonnade. The central block contains Hall and Lecture Theatre and administration; the two side blocks, boarding houses and class-rooms. It is quite a personal approach to the planning problems and owes little or nothing



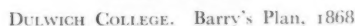
DULWICH COLLEGE. Built by Mr. Charles Barry in 1868

to the monastic archetype, and so far it is remarkable at this early date. It is indeed definitely institutional in character. But the way in which the boys' quarters and the class-rooms are evidently secondary to the masters' reception rooms and domestic arrangements is of interest. Indeed it will be found to be true in general terms, that the last quarter of the nineteenth century was marked by a notable increase in the domestic side of public school planning—an increase which indicated the growing abandonment of celibacy by the teaching profession—and that this development both in the matter of room and of aspect is gradually extended to the boys' quarters also.

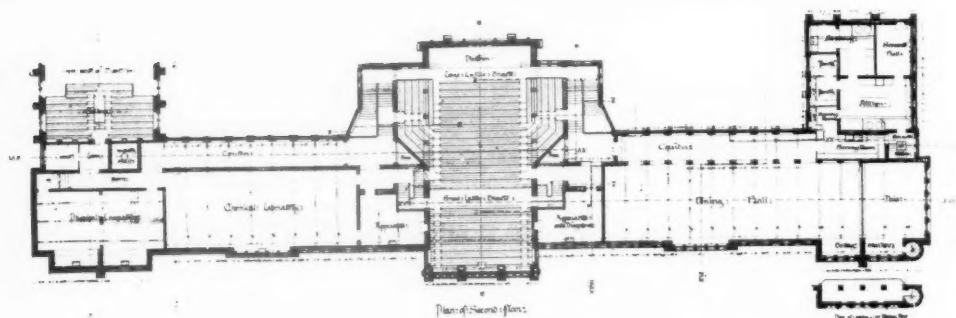
#### CHARTERHOUSE

When in 1872 Charterhouse, one of the first of the London schools to be conscious that its quarters were cramped, moved out on to its plateau above Godalming, we can see in Hardwick's plan the current ideal of scholastic authorities. Within the last sixty years it was still a common practice to teach a number of classes in one big room, the name of which, the Big

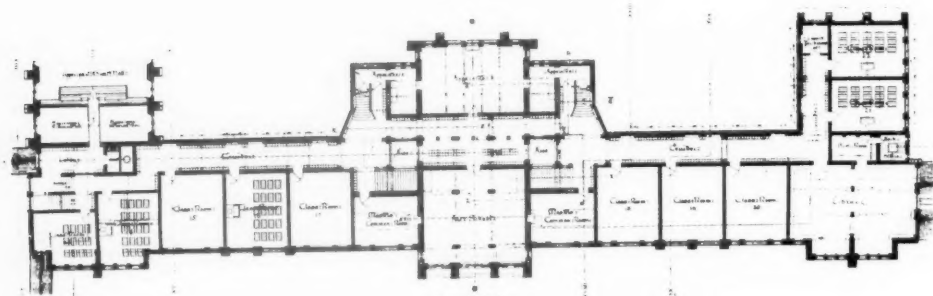
School or School, still remains as evidence. We remember how, in the Christ's Hospital of Charles Lamb's youth, "an imaginary line only divided the Upper and Lower Grammar School." And as late as the date of the Franco-German War most of the forms of the Merchant Taylors' School in Suffolk Lane were taken all together in the one large school-room. Here is still the big school-room, but now it has a modest offspring of class-rooms around it. Air and sunshine influence to a considerable extent the planning and lay-out of the boarding houses (at any rate of the first three to be built); but there are still some sunless areas, and the latent dispute between the claims of the boys and house-master remains; while aspect has not determined the class-room plan at all. In so far as preconceived scholastic pattern is concerned, Hardwick, who was an architect who would think for himself, has opened out the quadrangle into a three-sided court; but the uneasy symmetry of his otiose towers and the general character of window and roof betrays a lingering homage to the ideas which he expected his clients to have of the proper appearance



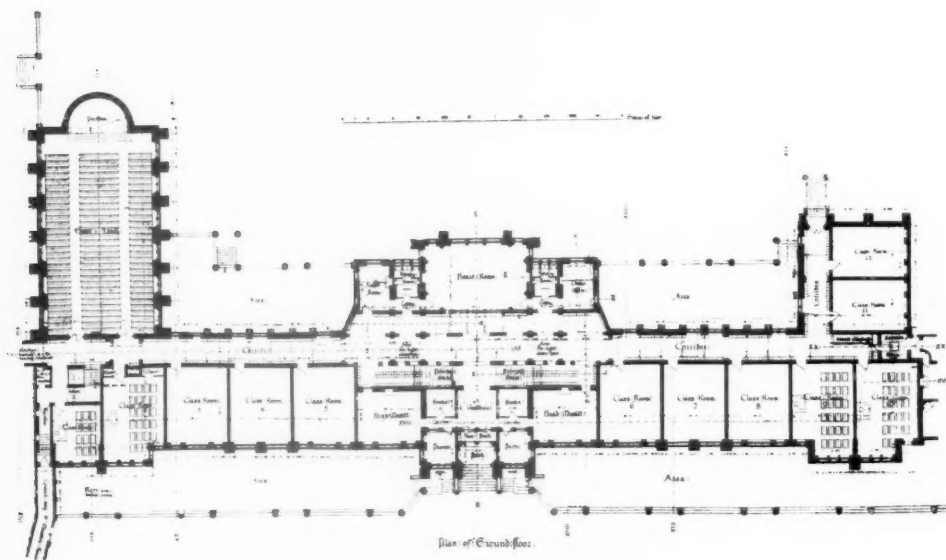
and art room and lecture theatre, shows a very marked advance in its emphasis on the importance of teaching. Scholastic opinion has plainly been moving in these last ten years. The basic defect of the plan, from to-day's standpoint, is that, as readers of *Sinister Street* will remember, almost every classroom faces north and is sunless. This is quite possibly deliberate. The advantages of a steady unchanging light for workrooms are obvious; while the curative properties of sunlight have perhaps not been generally acknowledged for more than a generation. There must, however, be some suspicion that Waterhouse was thinking of his facade to the main road. Whether in fact this would have been less successful had the classroom windows looked the other way, is debatable. Waterhouse is at all times very much himself in all his work, and there is little trace here of an imposed style of scholastic building. It is unfortunate that his practical knowledge of the lasting qualities of building materials was so very much in advance of his



Plan of Second floor.



Plan of fourth floor.



Plan of Ground floor.

ST. PAUL'S

sensitiveness to colour and form. His brick and terracotta seem fated to endure.

#### CHRIST'S HOSPITAL

Early in the nineties Christ's Hospital had determined to follow the example of a country life thus set, and abandon for the spaciousness of Horsham the streets and squares, the print-shops and the lions of London (no longer now at the Tower), where the ghost of Elia still strayed. The competition for the new buildings was won by Aston Webb and Ingress Bell. The report attached to their drawings shows a further advance in the theory of school planning.

"The quadrangular mediæval plan," they write, "for security and control, for convenience of daily work and economy of administration, does not admit of improvement. But it is insanitary." As an expression of opinion this is perhaps a little sweeping. Its interest lies in its recognition of the importance of light and air.

In working out the scheme, it was obvious to the architects that this new principle, important as it was, must not override all other considerations. Economy of administration, and of services, suggested that the main working parts of the new buildings, the Hall and Classrooms, the Dining Hall, Library and Chapel—should be grouped in a quadrangular form, though not so closely joined to one another that light and air are impeded. But the living quarters, the boarding houses for 700 boys, the masters' houses, and the sick quarters, are set out in a widely spaced array, taking full advantage of all sunshine and every wind that blows.

The school plan has evidently moved a long way from the ideas of William of Wykeham. For the earlier builders of schools the quadrangular plan was right from every point of view. It gave control and security, both against breaking out and against breaking in: it encouraged that sense of the school as a family, and a religious community, which was further given expression by the dominance of chapel or minster over the low-roofed mass of other buildings; and finally, it was, in their eyes, healthier to keep out the blasts of winter than to let in the summer sun.

#### A SUMMARY OF VICTORIAN VIEWS

The Christ's Hospital scheme, then, is from the point of view of this paper, chiefly remarkable for its acknowledgement of the importance of health standards, as then accepted. And coming as it does at the end of the century, it may, perhaps, be taken as a final summary of Victorian scholastic theory. The monastery conception has given place to the hospital conception. And with the mediæval plan

has been discarded the mediæval language in which Butterfield at Rugby, Burgess at Harrow, P'Anson at the Merchant Taylors' had delighted, or felt compelled, to express themselves. And here we may doubt whether the pedestrian "Jacobethan" of their successors, though less tortuous and unpractical, was a more suitable architectural garment for their ideas. The ideas are fresh, but the architectural garment is not. I feel that at Horsham, the invention has tired itself out in the labour of planning, and nothing is left to devote to the rest of the conception.

And here I would not be misunderstood. I do not complain that the architects have not invented fresh shapes for wall and roof, door and window—only that their ways of using these shapes seems to me not fresh, personal, zestful, as is their disposition of the plan. Originality in architecture, about which so much is talked today, does not mean inventing a language. Shakespeare is no less original than Joyce. Originality in architecture surely means thinking your own thoughts. You may think in forms that others have used, and yet be yourself, unique. But at Christ's Hospital, the plan-form seems to me personal, while the building-forms are from a catalogue.

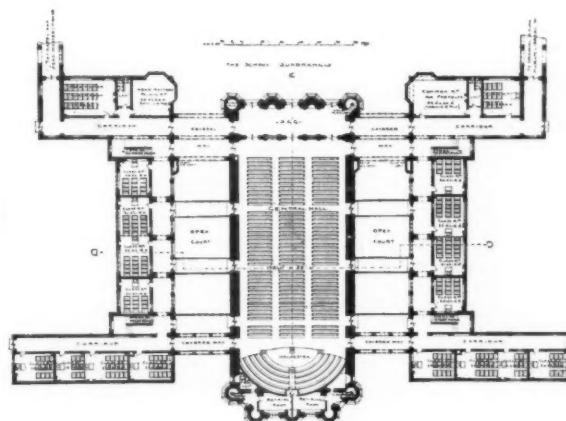
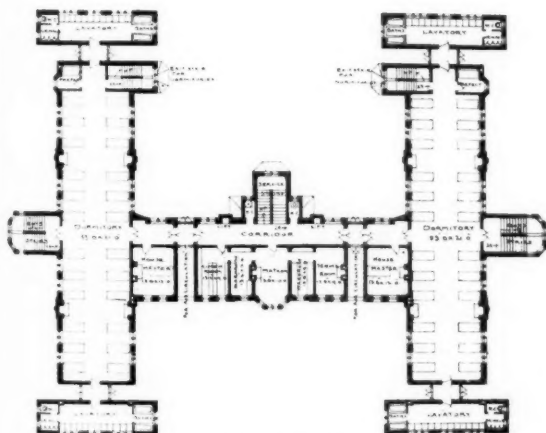
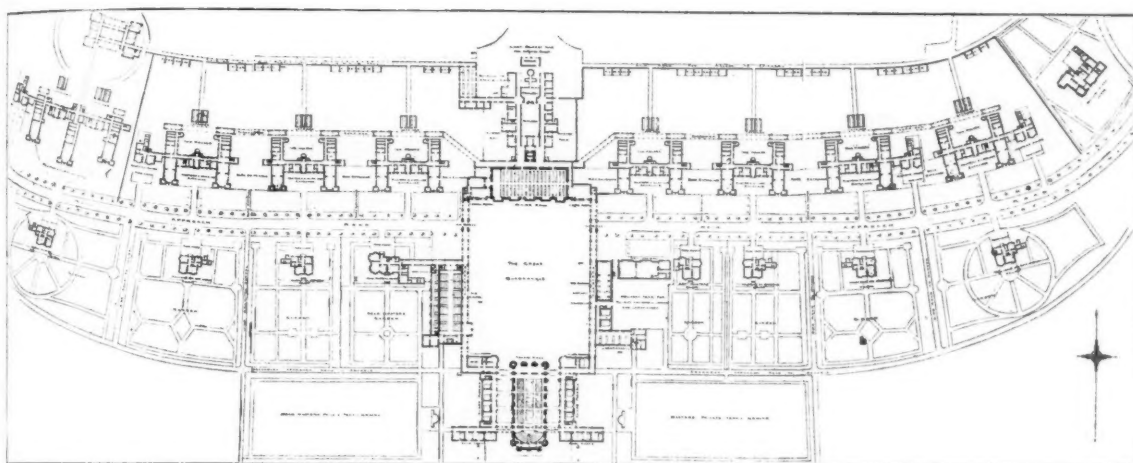
Christ's Hospital was built a generation or more ago. Is it a plan conception which we should wish to adopt without alteration today? I think two criticisms are obvious: the aspect of the classrooms, which, in contrast with Waterhouse's northern outlook, face all the other three points of the compass; and the fact that so widely spread an arrangement puts great difficulties in the way of any centralized heating scheme, and makes sheltered access to all parts out of the question. It is instructive to compare on this point Mr. Denman's compact plan for the Masonic Girls' School at Rickmansworth, now nearing completion; though it was a simpler problem in that the numbers involved were far less. Here there is covered approach to every part, and an opportunity for a scheme of centralized services.

#### SECONDARY SCHOOLS IN THE TWENTIETH CENTURY

For a generation after the completion of Christ's Hospital, there is no big planning movement to record in this country, though large sums were spent on scholastic building in the United States. Here, however, the plan type is foreign to our usage, owing to the almost universal preference in America for artificial ventilation, with the consequent grouping of classrooms on each side of a dividing corridor. In this country, there was a growing assent to the view, of which Mr. Widdows in Derbyshire has been







— FIRST FLOOR PLAN —

CHRIST'S HOSPITAL. Designed by Aston Webb and Ingress Bell. 1894

*Above.* General Plan showing the lay-out of the buildings

*Below.* On the left : Plan of one of the houses

On the right : The Big School block



conspicuously the champion, that natural cross-ventilation is the ideal to aim at. The period has been rich in secondary school building, and these ideas and others—ceiling and floor heating, for example, and the bungalow and verandah type of school—have had scope for development. With the prevalence of open-air ideas, we seem to be reverting to the Platonic Academy. But the figure of Socrates scratching diagrams in the sand seems hardly to assort with today's apparatus of blackboard and epidiascope and cinematograph. Perhaps these too will be found otiose—and teachers as well—when classes shall sit out in the sunshine and absorb through the ether instruction from a central headquarters. But fortunately for the architect—and the teacher—such developments are not yet.

#### MANCHESTER GRAMMAR SCHOOL.

Within the last few years, two great urban public schools have moved to the country, the Manchester Grammar School and the Merchant Taylors'. Both are day schools, so that the widespread boarding-houses of Christ's Hospital are not relevant. So we find in both plans the buildings grouped round open courts, just as in the central portion of Aston Webb's scheme.

The Manchester Grammar School, by Percy Worthington and Francis Jones, adopts the system of a main and a subsidiary court, with classrooms, Hall, and Library round the one, and Dining Hall, gymnasium, swimming-bath and changing-rooms round the other. This arrangement of a main court, or court of honour, and a secondary or service court, may be considered as looking back to the type plan of Great Renaissance houses, such as Blenheim or Castle Howard, and is a notable feature in the plan of Wellington College, built eighty years ago. It has many advantages. It allows the logical grouping of related parts, and encourages a change in the scale of their external treatment between the more and the less important. And in a widely dispersed scheme, it prevents the problems of access and control from getting out of hand.

In the Manchester Grammar School, a special problem was the oblique boy's approach from the north-east—a problem which has been very happily solved. And anyone who has seen the buildings, will agree that the architects here have certainly not been insensitive to the need for dignity and distinction of external expression in a modern public school.

#### THE MERCHANT TAYLOR'S SCHOOL

When, therefore in 1929, I was honoured, in

association with Sir Giles Gilbert Scott, with instructions to design their new buildings by the Merchant Taylors' Company, there was no lack of precedents.

The site was some 250 acres of land sloping sharply at first from the Sandy Lodge golf course, and thence running at a very easy gradient down to the water-meadows of the River Colne. The slope is thus from south to north. The land was farm land, and a farm track ran through it east and west, following a line of trees, mostly elm and red chestnut. The site had been chosen partly owing to its nearness to the railway. But a study of the contours soon made it clear that the only possible site for a group of buildings such as was contemplated was well towards the other end of the site, a thousand yards away from the station. This is not without its compensations. If many boys come by train, many also come by bicycle; and the buildings are well away from the noise of the railway.

#### CLASSROOM ASPECT BASIC IN PLAN

I have already suggested that the two most notable developments in the theory of scholastic planning during the last sixty years, are the growth of the apparatus of teaching and the increasing emphasis on the importance of light and air and sunshine. The influence of both will be apparent in the plans of the Merchant Taylors' new school. Apart from libraries, museums, and subsidiary rooms, there was a length of about a thousand feet run of classrooms and laboratories to deal with. If it be granted that there is one aspect which is most suitable for the classrooms, and that we should not go higher than two floors, the solution must produce a long low wing or wings, with all the working windows looking one way. Two wings was found the most convenient arrangement. We thus get the main teaching portion housed in two long low buildings with their main windows facing a little east of south; and forming two sides of a great open court, floored for the most part with grass, the main axis running east and west. Each long wing is, as it were, bestridden by a bulkier block nearly half-way down its length (housing an examination hall and a library and reading room in the one case, and in the other the staff common-room, museums, and music-rooms), and finishes at the west with return wings in a hammer-head form, containing geography-rooms, a lecture theatre, and laboratories. And the whole west end is linked together by a low clock-tower surmounting three archways through which is a westward glimpse of the playing-fields.

*Architect and Building News*

MERCHANT TAYLORS' SCHOOL: DINING HALL

It will be evident that a plan such as this, with its long working wings built parallel to the spinal road which runs through the estate means foregoing the dignity of a direct drive up to the main entrance. But the classroom aspect was of primary importance.

The approach-drive is therefore at right-angles to the main spinal road, the junction centred on the common fore-court of a pair of boarding-houses (only one of which has so far been built). The eastward-facing portion of the plan, fronting this drive, has been developed in the following way.

#### ASSEMBLY HALL

The question of the big Assembly Hall was crucial. It must be in easy relation with entrance and with class-rooms, as here the whole school assembles at the beginning of the day's work. For ceremonial occasions, it must be open to road approach. And, if it can, while meeting all these requirements, dominate the whole composition from every viewpoint, this will be a fitting external expression of its use and function. It has accordingly been placed on the first floor. Towards it the classroom corridors converge. Under it are coat-rooms and lavatories for 450 boys, with entrance halls at each end, open both to the daily stream of boys on foot, and the periodical approach of visitors by car.

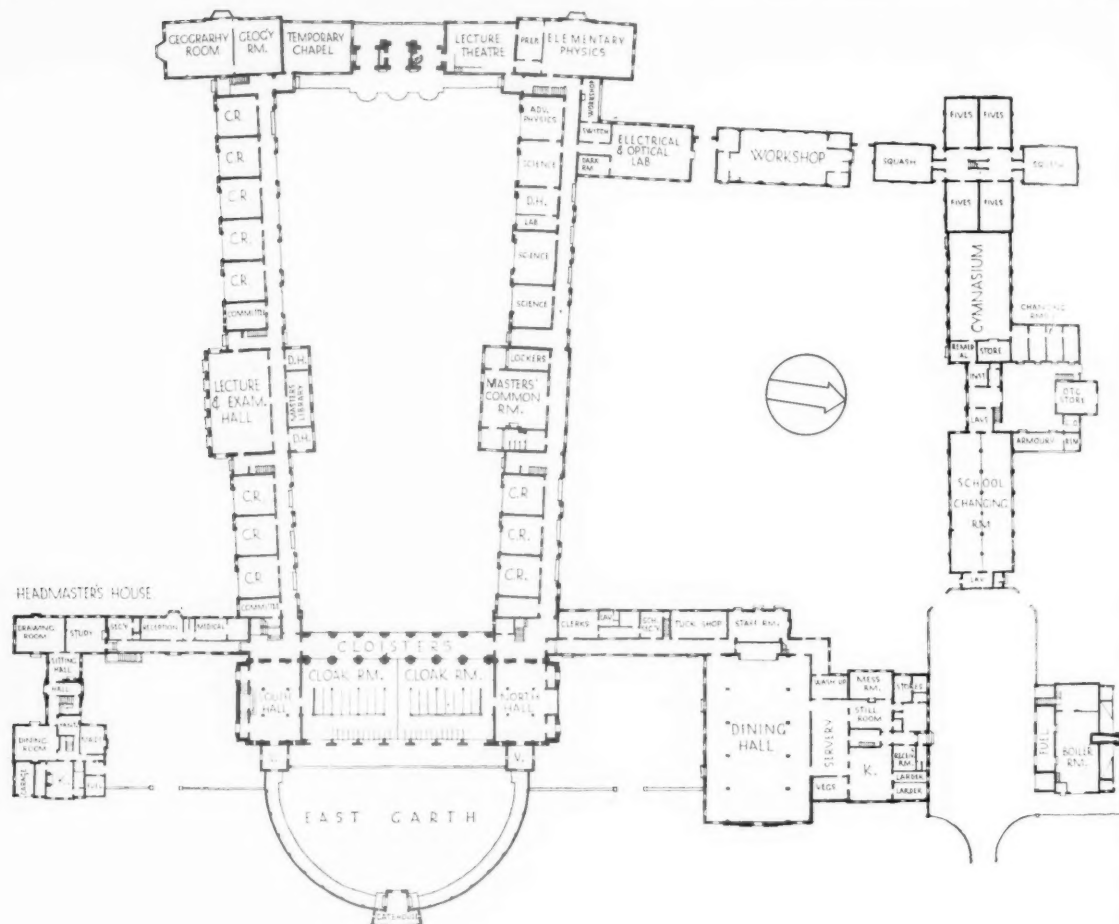
#### EAST FRONT

The dominant mass of the Hall, accordingly, which is linked to the porter's lodge by a half-circle of paved path and lawn, is at either end open to forecourts, where cars can set down and turn. These forecourts have other uses also. That on the south gives approach to the headmaster's house, and also to a door in the linking wing, for entry to the reception room and the doctor's consulting rooms. The north forecourt is bounded on the north by the dining hall, which has doors opening on to it, and in the linking wing are clerical administrative rooms, and above them living quarters for bachelor masters.

Beyond the dining hall, to the north again, are the kitchens and maids' quarters, and beyond these, on the most northerly and lowest portion of the site, is the furnace house, providing heating and hot-water to every part, except the boarding-house, which is isolated. All the pipes and service mains are carried in walking ducts which run throughout the buildings under the main corridors.

#### SECONDARY COURT

All the activities of secondary importance are grouped round a second courtyard, paved in ten foot squares on concrete. Here are the workshop, the gymnasium, changing-rooms, O.T.C. quarters, scout



GROUND FLOOR PLAN

hall, and fives and squash courts. It will be noticed that the planning of these last in the form of a cross has smoothed out an awkward difficulty at the N.W. angle, where a line of building set at right angles to the east facade meets the slight obliquity of the west facade. This device of the secondary quadrangle has already been noticed in the plan of Wellington and the new Manchester Grammar School.

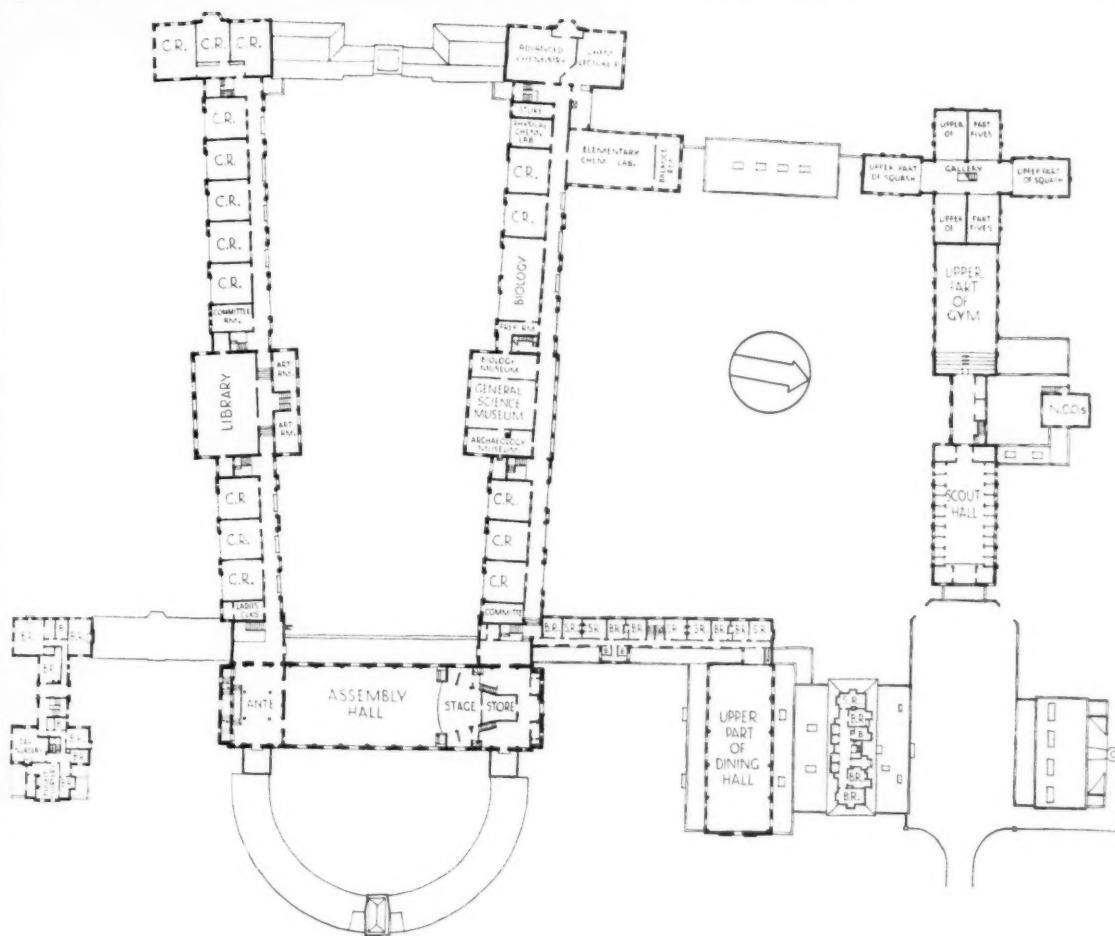
The whole group of the school buildings is placed in an intentional relation to the playing-fields. The axis of the main class-room court is continued westward to run through the southerly series of cricket tables and football grounds, and eastward beyond

the porter's lodge as the centre line of the Chapel site.

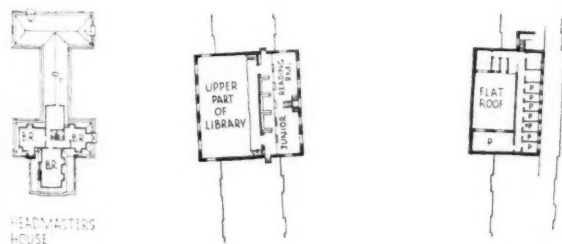
#### GENERAL CHARACTER ARISING OUT OF PLAN

An open layout of this nature, where all the parts can be approached and seen from all sides, allows of no untidy back parts anywhere. In the headmaster's house, for instance, all four elevations are of equal importance. Here the kitchen yard lies behind a wall; while for the adjacent porter's lodge, a special shed is provided for hanging out the washing.

Owing to the frankness of the plan, the massing of the shapes of the various parts is almost ingeniously obvious. The great bulk of the Assembly Hall,



FIRST FLOOR PLAN



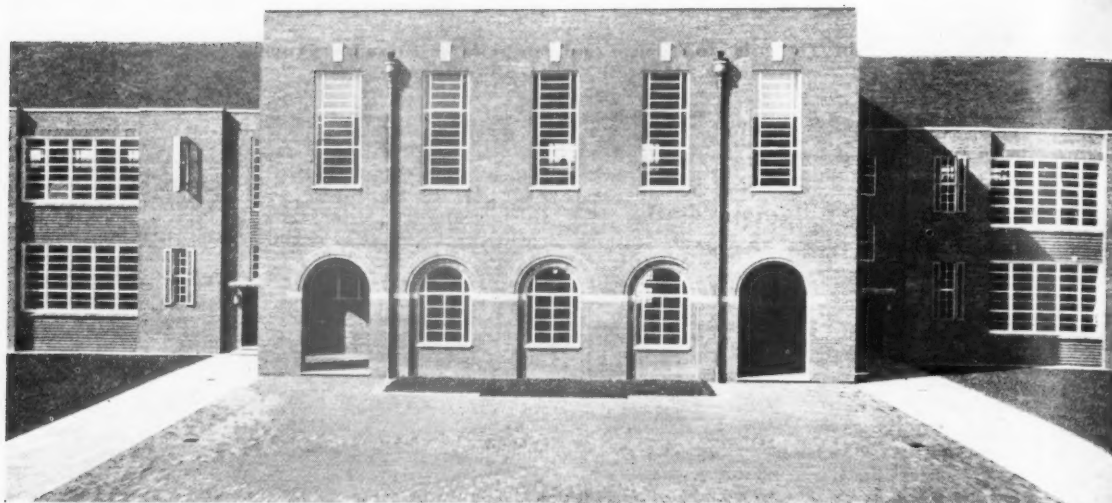
SECOND FLOOR PLANS

MERCHANT TAYLORS' SCHOOL

Key to the plans

- |      |                   |      |              |
|------|-------------------|------|--------------|
| C.R. | Class Room        | V.   | Vestibule    |
| D.H. | Departmental Head | B.R. | Bedroom      |
| P.   | Practice Room     | B.   | Bathroom     |
| K.   | Kitchen           | S.R. | Sitting Room |

0 50 100 150 200 250 FT



MERCHANT TAYLORS' SCHOOL

*Architect and Building News*

The central feature in the north side class-room wing, containing the museum on the first and the masters' common-room on the ground floor

185 feet long and some 48 feet wide, standing over the coat rooms 50 feet from ground to parapet, is both by size and position the predominant element. Its roof line is unbroken by turret or pinnacle: at the west-end of the main group the clock-tower with its three arches is designed to give, by contrast, its own secondary emphasis. Midway between east and west, the square forms of the library and the museum buildings, set in the low lines of the classroom wings, give these more importance, and save them from being overwhelmed by the Hall mass; and at the same time, mark as it were, a pause in the east and west traffic, where there comes the main opportunity for north and south communication by way of the brick-paved square which separates the two inviolable lawns of the main quadrangle.

In the secondary quadrangle, the lines of the buildings are low and sweeping, and the chief emphasis comes where the shadowed loggia and archway marks the way through to the small O.T.C. court on the north-south axis, opposite the museum block.

The basic idea of the plan, which has been already referred to, namely, the provision of uninterrupted light from the same aspect for the class-room wings, carries the corollary that there will be no transverse building across the main court, and therefore no covered communication between the wings, except at the ends. This might be considered a disadvantage, but there are two points to bear in mind. In the first place, it is possible to arrange the use of the various groups of classrooms in such a way as to make cross traffic infrequent (for example, all the N.W. group is devoted to science); and secondly, it is certainly arguable that, provided there is the possibility of covered access, however indirect, in case of snow or thunderstorm, it is no bad thing in a day-school, where every "unforgiving minute" has its task assigned, to encourage boys to come out into the open air whenever possible.

#### MATERIALS

The buildings are of brick, mostly four courses to ten inches. Every fourth course is a header course,



but the variety of colour in the brick has made the bonding scheme scarcely visible. The walls throughout are carried on concrete beams and legs which go down six or eight feet below the ground to obviate settlement from clay shrinkage. There has been no sign of this, but stress cracks have shewn at certain points in the long class-room wings, caused apparently by the expansion of the brickwork under the summer sun. In certain places, the walls appear to have slid upon the damp-course half-an-inch from this cause.

In some particulars, the treatment of concrete is a little unusual. The porches on the west elevation are made with an aggregate composed of silica sand and white glass. Glass fragments have also been used in the vaults of the cloister under the Assembly Hall—this gives them a gleam as of water. In the Ante-Hall to the Assembly Hall, the structural octagonal concrete posts have been rubbed down with a carborundum pad to the texture of Hopton Wood stone; and in the Assembly Hall itself the concrete ceiling has been left as it came from the shuttering. On the stage here the concrete remains with the plank marks on it, and decked out with a pattern of gold and silver spots so that the surface somewhat recalls the look of a stave of music.

#### COLOUR

Much attention has been paid to colour. It was felt that the drab chocolates and greens of other days were no longer to be borne. Thus, in the entrance halls, the bright green baize of the black-framed notice boards which run all round the walls, set the note: the walls are white, the tiled floors rusty, the structural columns ruddy gold, with green bronze caps. The Dining Hall is sand-coloured plaster, with grey bones of washed concrete; a deep brown floor, with a random green scattered about it; and a sparkle of green and watery gold in the painted window, a sparkle which is echoed by the three patterned panels in the ceiling. The colour scheme of the smaller Examination Hall, panelled to door head in fawn-coloured pine, with sandy walls and blue and green taut cords covering the radiators, is temporarily put out of countenance by its furniture of varnished yellow desks. The walls of the great Assembly Hall are finished in Indian silver grey wood veneer, the planks set forward and back in parallel planes, and the grey concrete ceiling, warmed by the reflection from the wood work, has touches of gilding, like the gleam of night lights, where beams meet their supports. The decoration of the ceiling of the geography room with a Barthole-

mew's coloured layered map of the whole of England, is justified by its interest and beauty, though the pedant may object, as he lies supine, that east is west.

#### CLASS ROOM TREATMENT

Among other points which might be thought worthy of notice, is the treatment of the class-room windows. Two-thirds of the outer wall, that is the boys' portion of the room, is glass, with metal windows in cast-iron mullions: the other third, corresponding to the masters' portion has a solid wall slightly projecting from the other, and a small window. By this arrangement, the window wall of a classroom-wing is given rhythm and solidity, in place of the uneasy repetition of large voids and apparently precarious solids, which is its more usual character.

The classroom corridor elevation has a somewhat similar rhythm, with long horizontal windows over the book-lockers, and french windows in slightly projected bays giving a view out over one or other of the quadrangles.

The fives-courts have been planned in a cross form which has the convenience of a common spectators' gallery for all the courts, and also allows for hosing down the glass roofs of each in turn from the central flat, and for access for repairs. Two fives-courts equal the gymnasium in width, so that the eaves can run on without a break.

#### INTERIOR FINISHES

In the choice and use of materials for internal finishings the school architect has to aim at the permanence and cleanliness of a hospital, and to remember that it is a hospital where the patients are aggressively active and mobile. The classroom corridors, which suffer this mobility many times a day, have floors of brown granwood blocks, and this is taken with a coved skirting up the walls to form a dado. The class-room doors are flush doors veneered in oak or teak. On the opposite wall of the corridor a nest of 20 or 30 steel book-lockers, enclosed in oak or teak, similarly forms a protective screen. The staircases have a terrazzo finish, which again is carried up the wall as a dado. In spite of the provision of expansion joints in panels, some cracks have occurred where they were not intended. Balustrades are mostly black wrought iron, with a white metal band and an ebonised hand rail. In classrooms, where walls are protected by benches or desks, dados are either veneered in wood or paint on hard plaster. The iron mullions of the classroom windows were specially cast. Internal sills almost everywhere are of quarry tiles.

In a number of places plastering upon concrete soffits has been avoided by the use of plastic paint, which is just thick enough to smooth away the lines and grain of the shuttering.

The paint work is sprayed cellulose, and a clear cellulose lacquer finish has been used on hardwoods: patience herein has even succeeded in taming the harlequin grain of British Columbia pine to a kindly harmony.

Windows and french doors are of steel. All doors in the main school buildings have some form of spring or friction check. The cross-ventilation theory makes these very necessary.

#### BOARDING HOUSE

The boarding-house, which the transition from a London to a country school has made necessary, has been planned for fifty boys. There are two day rooms, with a fitted desk for every boy, on the ground floor, and three dormitories. The problem of a boarding-house is to provide dormitories which have cross-ventilation and yet adequate escape either end in case of fire. In this plan each dormitory has access to a fireproof staircase at both ends. Every dormitory has its own washing rooms. Each bed has its own window; it is always a problem to give dormitories enough glass area without making the windows so big as to impinge on the beds. Here the wall windows are made comparatively slim and the extra area is got by dormers, with the ceiling at collar level. In the day-rooms every desk has left-hand light, and both rooms have south, as well as north, windows.

Apart from the boys' quarters the other two problems of a boarding-house plan are to arrange the kitchen and service quarters so that they are rightly placed for both private and boys' service, and to make a unity of the inward treatment and outward expression of what are really two houses. The boys' part is made up of large units, and not many of them: the private side has the scale and multiplicity of domestic work. In the Sandy Lodge boarding-house the parapet walls of the private side rise above the eaves line of the boys' side, so that the

difference of internal floor heights is compensated. The window treatments, where in the one part are steel balance-windows in wood frames, and double-hung wood sashes in the other, though different are not discordant.

#### LAY-OUT

The lay-out of the grounds and the garden work immediately round the buildings aims at making due transition between the park-like acres of the playing-fields, and the smaller scale and more intimate character of the architecture. The western façade, facing the playing-fields, is prolonged at either end by yew-hedged closes. In every case the sunny classroom windows look out on lawns and flower beds, rather than paved areas which would reflect the heat of summer. Flowering cherries and hawthorns answer to the red chestnuts which were planted a generation ago along the line of what is now the main estate drive. And stone-paved paths lead out to the flagstaff on the west and define the frontier between garden and park.

#### CONCLUSION AND APOLOGY

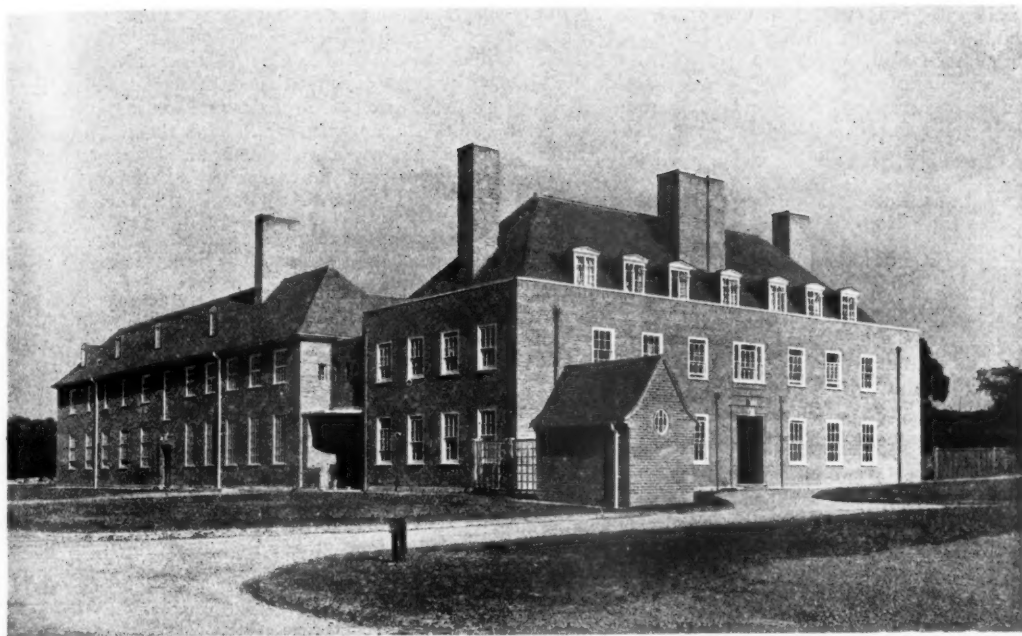
I am conscious that I have written too much about one school, and too little about the general development of school architecture. But my excuse must be the simple one that I am intimately acquainted with the one, and only at secondhand with the other. Within the limits of a paper such as this I have thought it would perhaps be more interesting and more profitable to illustrate problems and tendencies in the first person, as it were; a man will know his own aims and difficulties, but can only guess at those of others. In conclusion I think it would not be out of place to pay my modest tribute to the courage shown by the Court of the Company in undertaking and carrying through this great task during a period of alarm and despondency. Whatever may be the verdict upon the buildings, there can be no question that five hundred boys will benefit in exchanging for the purlieu of Smithfield market the fields and trees and water meadows of their new home.

## Vote of Thanks and Discussion

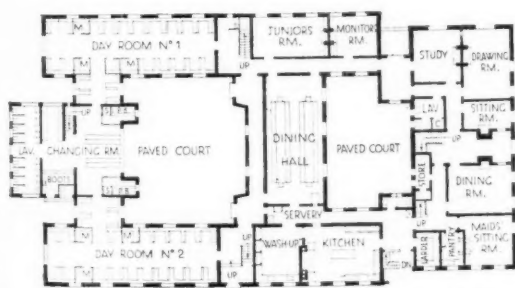
Mr. FRANK FLETCHER, M.A. (Headmaster of Charterhouse): Mr. President, ladies and gentlemen, in the exceedingly practical paper which I was sent when I was asked to propose a vote of thanks, I was told that one of the rules of the Institute was that the President

must, without fail, disperse the company at 9.30. Under those circumstances, you will neither hope nor expect me to make a long speech, and you will excuse my hasty remarks which I have to make. I believe the only reason I am in this very honourable position this evening is that

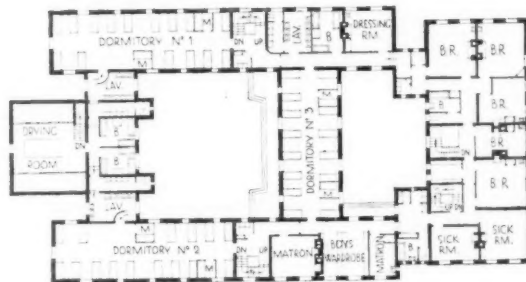


*Architecture Illustrated*

MERCHANT TAYLORS' SCHOOL. BOARDING HOUSE



GROUND FLOOR



FIRST FLOOR

10 5 0 10 20 30 40 50 60 70 80 90 100 FT

I am partially responsible for the education of the gifted Professor who has read the paper. It is a responsibility which I am quite prepared to take, and I shall be glad if he will give me credit both for the brilliant success of the architecture which he has achieved, and also for the exceedingly witty and attractive way in which he has presented his ideas to you. I was particularly impressed with the combination of tact and irony with which he described the buildings of the late Victorian period, with which I am, personally, considerably acquainted. I consider that his description of Charterhouse and other parallel buildings was a model of tact. For some time, rightly or wrongly, I have held—and have sometimes somewhat indiscreetly expressed—the opinion that there should have been an Act of Parliament passed in 1870 to prevent any permanent buildings being put up between that year and 1890. I said that to Sir Giles Scott, and he was willing to agree, though he said it would cut out his Grandfather! It would have cut out many of the public school buildings from which some of us suffer at the present day. I hold no brief for the majority of the buildings of Charterhouse, but I do feel that they might have been worse. When I visit the buildings of some of the other schools, I feel there is something to be said even for our somewhat ornate architecture. When I see the buildings of Mr. Waterhouse at St. Paul's School, or that strange-looking railway station which calls itself Wellington College, or the buildings of Butterfield from which, for ten years, I suffered as a master at Rugby, and those from which I suffered as an undergraduate at Balliol—built, as Lord Davidson said, “by that dreadful man Butterhouse”—when I visit those schools I say: “There, but for the grace of God, is the building of Charterhouse.” But, when I come to the new Merchant Taylors' School, it is a different proposition, and I can say: “Happy are the people who are able to build in the present generation, and not in the generation between 1870 and 1890.” And the only thing I can do is to suggest to people who have to live in the buildings of the late Victorian period, that they should point out that their chapel is completely inadequate, and get Sir Giles Scott to design them another. I consider that the beautiful chapel which Sir Giles has built for us at Charterhouse is one of the greatest and most valuable contributions that has ever been made to public school life and religion.

Professor Newton has talked with great experience and skill about a large number of technical details concerned with the buildings. I am constitutionally incapable, like most laymen, of understanding a plan but, unlike most laymen, I am honest enough to say so. But, personally, I think that beyond all question of accommodation, or comfort, or environment, is the matter of taste, of the style and the beauty of the buildings in which the boys are to receive their education. It seems to me that it does not matter very much whether a boy is uncomfortable, or has not enough bathrooms, or has to go out of doors in bad weather to reach another part of the

school instead of travelling along a covered corridor; that part of his education is perhaps good for him. But it does matter that he has to live in buildings which are fundamentally in poor taste and of a false style of architecture. There are few things which are of more importance to the boy than the sentiment which he gathers in his public school education. If you give a boy ugly buildings, you will defeat that sentiment, and leave him with a sense of repulsion associated with his education, or you will teach him to associate sentiment with buildings which are not worthy of it, and this second course is the worst that you can do for him. It was one of the great sayings of Plato that you should bring up boys in dwellings which are not only beautiful in themselves, but also have beautiful furniture in them, so that the associations of his boyhood may be for him a “breeze bringing health from beautiful places.”

I see, now, a new era of architecture growing up, of which we have had illustrations this evening, in which not only the comforts we desire will be provided, but also an architecture of which the boys will be justly proud, and which will teach them to appreciate beautiful things. Plato also said that the real object of education is to teach people to like and to dislike the right things, and it is you, gentlemen, who are architects, who have, perhaps, the largest share in contributing to that result.

I wish, in your name, ladies and gentlemen, to thank my old pupil and friend, Professor Newton, very heartily for the address which he has given us, and I have to thank the Council of the Institute for the opportunity of proposing this vote of thanks to him.

Mr. JOHN BELL, M.A. (High Master of St. Paul's School): Mr. President, ladies and gentlemen, I think it is not without significance that Professor Newton himself in his early days, as I remember, was brought up in a building which, it is true, was not originally designed to be part of a school but is certainly one of the most beautiful buildings connected with any school, old or new, in the country; and I think it must have been from the old Castle Inn at Marlborough that Newton gained some of his inspiration for that magnificent new school which we, at the Headmaster's Conference, were so delighted to visit and inspect with envious eyes last December. I also feel very grateful to him that he has traced for us the development of public school architecture during the last 60 years, because even though those who built in the '70's and '80's did not, in all respects, carry out the most modern ideas with regard to the objects and functions of school buildings, at any rate they were guides as to what should be avoided, as well as to what should be imitated. A number of those who have, in the last few years, contemplated rebuilding their schools have come to St. Paul's School to look round. I remember the High Master of Manchester Grammar School, just before that school was removed to Fallowfield, looking round St. Paul's School. He was very kind in his comments, and you have seen the results in the new buildings of the Manchester Grammar School, which are

not in all respects the same as those erected by Waterhouse, into which we moved in 1884. We realise that we are in a quarter of London which is not so favoured as the magnificent surroundings in the neighbourhood of Sandy Lodge, that there are many things which we would like to have other than they are; but it is not that we do not appreciate the work of Alfred Waterhouse, because I have often thought, when watching a cricket match at the back of the school, that he had a great sense of form and mass. Although we may feel inclined to criticise the way in which he compressed his buildings into one structure, so that the boys were not subjected to the elements when moving from one class room to another, there is much to be said for such a building in the middle of London, especially as there are growing up all round blocks of flats and other buildings six or seven storeys high, with which we have to hold our own. When Waterhouse moved St. Paul's School from the City, it was a move to the edge of the four-mile radius. Not so many years ago there were two sets of cab fares, the boundary between which was a certain house of call known as "The Red Cow," and if to-day you wish to take a taxi-cab to St. Paul's School, the only way in which you can make it clear to the driver is to tell him to "go as far as 'The Red Cow' and stop just before you get there."

We have already had tonight a reference to Plato, and I should like to quote the saying of another great Greek poet: "It is men and not walls that make a city." That is to some extent true, but I feel that the boys of Merchant Taylors' School, who have now for 300 years maintained the glorious traditions of their old school, will be all the happier for their walls and for their surroundings, and that these will lead to yet more glorious traditions in the future in that they are now privileged to live in a place where the beauties of Nature and the skill of the architect have combined to give them surroundings which are as near perfection as anything in the way of school buildings which have been erected in the past centuries of this country.

And so, Mr. President, I am very greatly honoured by being asked to second a vote of thanks for this most instructive and delightful Paper.

The PRESIDENT: I would like to say one word, if I may, as Professor Newton has mentioned my name in association with this great work of his at Sandy Lodge. My position with reference to this work was rather that of holding a watching brief; I had little or nothing to do with it except that I had the most important task of advising the Merchant Taylors' Company in the choice of their architect, and in that respect I feel I did them a good turn. But, apart from that, I had little to do; I was there only in case of emergency, which never arose.

I now invite discussion on the Paper. We have with us to-night, I am glad to say, Mr. Russell Pope. I hope I am not doing anything which will trouble him, but I should be glad if he would say a word or two, if he feels inclined.

Mr. JOHN RUSSELL POPE, P.L.B., M.A. (Hon. Corresponding Member): All I can say this evening, Mr. President, is that from time to time I come to England, for one purpose or another, and I always leave with a feeling of gratitude to you members of this organisation for your kindness and courtesy to me, which I hope will extend for years to come. I hope, too, that I shall be able to return to some of you members, when you come to America, the same kind of pleasure which you have given me. It is sincerely and deeply felt.

Sir HENRY PELHAM, K.C.B. (Permanent Secretary, The Board of Education): Mr. President, ladies and gentlemen, I had no idea that I might be required to say anything to-night, but I do happen to have seen the building which is the main purpose of the Paper, and I had a not merely official interest in one chance experience that I had there. I attended, or rather I was too late to attend, a big function in that large hall which you have seen depicted on the screen, and what interested me was that while standing several yards outside the doors at the bottom of the Hall, I could hear every word the Headmaster said when he was speaking from the dais. And, more remarkable still, when afterwards a small boy with a pure but not powerful treble voice, sang some school song, I could hear every single word he said. To the mere official it was interesting to find that a hall so intensely beautiful had also, so far as I was able to judge, perfect acoustics. And—if it is not disrespectful to say so in this Hall—that quality does not always go with beauty of architecture.

Mr. O. P. MILNE: Mr. President, ladies and gentlemen, I am afraid I do not speak with any ease unless I am given some warning that I may be asked to do so, and because I have had no warning to-night I find it difficult to gather any thoughts together to present to you.

You must, with me, have been extremely interested in Professor Newton's Paper, and the very charming and delightful way in which he has told us all about the building of this most admirable and delightful school. I think the thing which impressed most of us more than anything else about this school is its extremely homely quality. So many of our modern buildings are rather institutional in aspect. The delightful aspect which Professor Newton has given to this school is one which should be aimed at, and, if found possible, imitated.

I have not yet seen the building, but I am hoping to, and I am looking forward to a delightful day when I go over it.

Mr. W. G. NEWTON, in reply, said: Mr. President, ladies and gentlemen, I must thank you very much for having listened to my remarks so patiently. Of course, it is a very great privilege to have an opportunity of this kind, but one is always struck at the Institute by the extraordinarily generous way in which one's fellows are prepared to deal with one's bad and good qualities, and that is an aspect of matters which

has come out very much this evening. Everyone is always very cordial, and I think we are all really interested in each other's work, and would like to see more of it if we had the opportunities of doing so.

I do not think there is really need for me to add to all I have said. I must thank Mr. Fletcher very much for his kind words; it is not often one has the opportunity of the last word with a headmaster, and I will forgo the privilege now. Mr. John Bell is only a child; I was at school with him and was, if not bigger, older and more important! I am sorry Mr. Leeson was not

present this evening, because he has borne a tremendous burden. He not only is Headmaster of Merchant Taylors' School, but in addition to his ordinary labours he had to deal with the digestion of the views of the various committees—he is rather fond of committees—and bring them into line. His has been a terrible labour. He is now balder than he was, but he is still very bright about it.

Thank you for listening to my frivolous remarks. This is the last time but one that we shall meet here. Thank you very much.

## The Presentation of the English Students' Prize in the Franco-British Union Competition

*At the General Meeting on Monday 28 May, the President presented Mr. G. A. Crockett with the medal which Mr. Arthur Davis, A.R.A. [F.], had given as the award in the competition organised by the Franco-British Union of Architects for students from French and English Schools. After he had handed the medal to Mr. Crockett the President called on Mr. H. M. Fletcher [F.] who said :—*

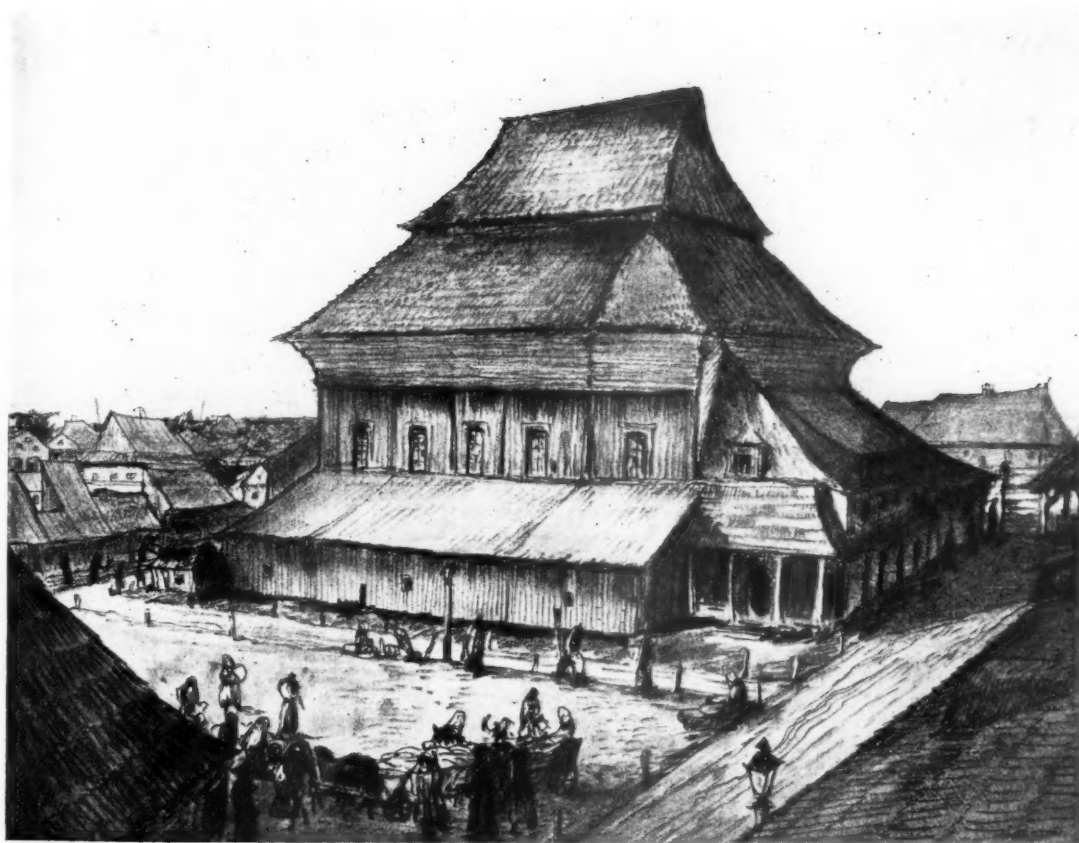
Mr. President, ladies and gentlemen, It is my very pleasing task this evening, owing to the unavoidable absence of Mr. Ansell and the deplorable modesty of Mr. Arthur Davis, to tell you a little about this Medal.

The competition is between students of the Ecole des Beaux-Arts in Paris, and students of the schools in England recognised by the R.I.B.A. for exemption from the Final Examination. The competition was set going by the Franco-British Union of Architects, a pleasant body consisting of architects of the two countries. It was founded in 1921, after the war, and has, as its object, the cementing of the friendship between French and British architects, to secure that, whatever politicians may decree, at any rate the architects will stick together. Our thanks are very greatly due to the French section of this Union for getting over all the difficulties of State organisation, synchronising the distribution of the programmes, and so on. It is not an international competition, that is to say, the French award the Eustache Rougevin Prize to their own winner, and we award the medal which Mr. Davis has kindly given this year to our winner; but there is no placing in order of the designs submitted. And it is better so; international conferences are making a pretty bad show in these days. Each nation can observe the work of the other and learn the lessons which are to be derived from it, without wrangling

or jealousy or disputes. We hope that some rivalry of this kind will become an annual event.

This year the prize chosen for the subject was the Eustache-Rougevin Prize, which is one of the prizes of the Ecole des Beaux-Arts for a decorative composition; it was selected by our preference. There is no question of our winning the prize, because it can only be held by a French subject. The preliminary judging was done by the headmasters of the schools competing, and each headmaster chose one design, which was sent here, and the final judging was done by a jury here in London, consisting of past or present members of the Board of Architectural Education, and several of them were, in addition, past students of the Ecole des Beaux-Arts. The judging was difficult, but finally all the judges agreed unanimously in awarding the Medal to Mr. Crockett, for his imaginative design for a monument to stand at the end of a great avenue in front of a stadium, the monument being intended to commemorate the victors in international games.

Next year, in accordance with French wishes, the subject will probably be one of planning, and our people will have to go all out to make a show against the 250 years' tradition of French planning. As I have said, this design was unanimously chosen by the jury, who offer Mr. Crockett their very hearty congratulations on his success.



A SYNAGOGUE AT CHODOROW IN POLAND

From a drawing by Prof. G. Lukomski





CIESZOWZ

## JEWISH ARCHITECTURE IN POLAND

BY PROFESSOR G. LUKOMSKI

THERE is a widespread opinion not only among the public, but also among specialists, that in the history of Jewish civilisation the pages concerning monuments of art are of no importance whatever, the Jews having created no works of art other than musical, philosophical and literary.

Only quite recently there have appeared in the *Illustrated London News* works reaching as far as the third century, which have been discovered by Mr. Rostowtzev. The architectural relics of the previous

period are certainly without importance, but there is reason to believe that they existed.

Now this common view on Jewish art is about to be altered, not so much through the influence of German books written between 1910-30 about synagogues of the twelfth and fifteenth centuries in Spain and Germany, as through the publication of the results of a research recently undertaken in Poland. Until now the articles in Polish papers on this subject have been ignored by the Western European public.

### PAGAN INFLUENCE ON JEWISH ARCHITECTURE

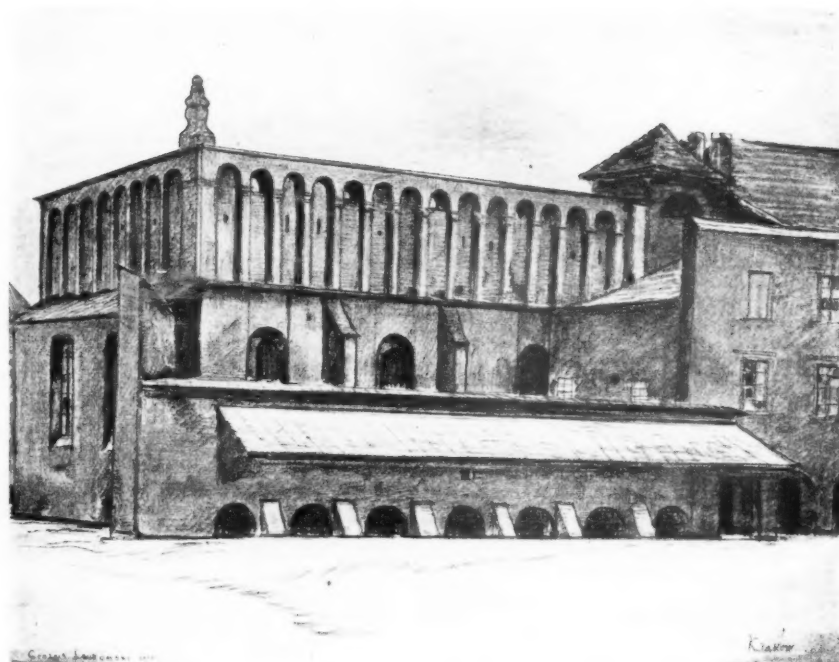
The widespread opinion is that the Spanish synagogues, e.g., those in Toledo, have served as models for all the newly built synagogues, which have imitated their mauresque style. Those monuments, however, are not at all typical of Jewish art and show as few truly Jewish traits as the famous Gothic synagogues of Worms and Mainz.

The real Jewish style with a character, originality and imagination of its own was created in Eastern Europe: in Russia, Poland, Rumania, Czechoslovakia and Latvia. The Jews who came from Crimea, Caucasus and Asia started imitating in the Poland of the fourteenth century monuments of the previous period of Polish pagan architecture.

After the settlement of the Jews in Poland during the

thirteenth and fourteenth centuries synagogues were built freely, not only thanks to Polish tolerance but also thanks to the generosity of the gentry and of the kings. The nobility, especially in the Eastern provinces, gave permission to the Jewish migrants to establish themselves in newly founded town boroughs for the purpose of fostering trade. Thus, already in the fourteenth and fifteenth centuries, synagogues were built in Poland, whereas in other countries of Western Europe only the erection of prayer houses was allowed.

In Spain there were constructed at that time (thirteenth-fifteenth centuries) only small houses, well decorated inside but alien to the purely Jewish art and taste. In Italy and in Southern France (Padua, Venice, Carpentras, Cavaillon) synagogues were built in the



KRAKÓW

fifteenth-sixteenth centuries, some of them to the plans of masters such as Sansovino or Scamozzi, but they have no individuality of type and their size is moderate. In Germany, in the fourteenth-seventeenth centuries even larger synagogues were erected (Prague, Worms, Mainz), but they are of lesser importance from the point of view of expression of the Jewish iconographical and architectural personality. On the other hand, the Polish synagogues, both wooden and brick, are very characteristic and impressing—sometimes they are colossal in proportion to the surrounding houses.

In the development of the wooden architecture which followed this period we can detect the strong influence of the pagan temples of the eighth and tenth centuries which still existed in the sixteenth. The last pagan temple was destroyed in the eighteenth century. The first specimens of Jewish architecture in the romanesque period, though following the style of the period (the styles follow each other in Slavonic countries sometimes about 200 years later than in West European countries) were under a strong influence of non-Christian monuments. The stone and especially the wooden architecture of the synagogues strikes us with its odd combination of pagan, Indian or Chinese motives, and is at the same time full of archaism and marked with a strong originality. The Jewish temples in this vast country, spreading from the Dnieper to the Western Dvina, and

from the Black Sea to Prague, are typical of this architecture and have features of their own. They are artistically quite distinct from the Catholic and the Orthodox churches and from the mosques.

The views of some critics of art on the Jewish architecture were paradoxical—J. Klos has written: "The brick and the wooden synagogues deserve a close attention, because the oldest architecture of Poland is preserved in their structure."

The historians searched throughout Palestine for the origin of the synagogue which was "imagined by carpenters of Tyr, and through Jews' wanderings spread in the world." The investigators regarded this type of synagogue as purely Jewish; but further research has proved that the style of synagogues varies according to the epoch and the country in which the Jews have settled, or from which they have come (Krautheimer, Szyszko-Bohusz).

But on the contrary: "Neither in Palestine nor in any other country of the world are there synagogues bearing even the slightest likeness to the synagogues of Poland," writes Szyszko-Bohusz. The later research of the Institute of Architecture of the Polytechnic of Warsaw and the discoveries of Prof. Sosnowski and his pupils (Zajczyk), as well as of older scholars (Szyper, Batabon) bring us to another conclusion. The synagogues, at least a large part of them were built not by the Jews themselves but





LUBOMLA

by Polish carpenters, who applied to them the same structural methods as they did to the churches and castles of the Polish gentry.

The thesis ascribing the origins of synagogues to pagan art was worked out in detail by the late Stefan Szyller, and the hypothesis which gives to the synagogues an origin in the ancient pagan houses of worship is gaining more and more likelihood (such is the opinion of Karczewski in his book *Poland's Monuments and Landscapes*).

The Jews, on their arrival in Poland, found there an

already well developed type of pagan temple (fifth-ninth centuries) which they simply adapted to the needs of their religion. Their tradition and care have preserved those curious shapes until the present day, although the wooden material used originally was perishable.

And as to-day, in the twentieth century, we can examine wooden structures of the sixteenth and seventeenth centuries (in Norway and Finland even of the fourteenth), so the Jews of the sixteenth century could copy the architecture of the earliest years of our era.

#### WOODEN SYNAGOGUES

The shape of these structures, especially of the roofs, is certainly of Asiatic origin (Tibet, China), either imitated by the Jews who came at first to Europe by way of Crimea and Caucasus, or common to all pagan temples, even before the coming of the Jews.

The wooden synagogue of Eastern Europe by its general disposition, the outline of the main body of the building, and its position with regard to the wings, the shape of the roof and its general appearance is unlike any other structure known in Europe.

The arches of the roofs and ceilings, of varied design, are very remarkable both artistically and practically, and give proof of the great skill of their authors.

The old Jewish synagogues are very interesting monu-

ments of art, as they have preserved the ancient forms of Slav architecture. The Jews have found in Poland a highly developed architectural art, especially of wooden structures, and they have adopted it for the purposes of their religious worship. Thus the shape of the pagan temple was fixed for ever in the Jewish synagogue—and with the help of the Polish carpenters a wholly individual style of architecture was created.

The research of many historians, several of them Jews, has proved that the wooden synagogue has preserved the very early form of Slavonic architecture.

The building is generally square, with two or four corner towers (here the influence of castles and manors is evident).



POLANIZC

A large roof with often as many as three planes is similar to the roof of the ancient Slav temple, known from its description given by the chronicles. Detailed research has confirmed this impression and has proved other affinities of the synagogue to the pagan "gontyna," also called "boznica," which in to-day's Polish is the word for "synagogue"—a significant coincidence.

The last "gontyna" on the isle of Rugen was burnt down towards the end of the fourteenth century, and that is also the period of the first arrival of Jews in Poland. The tradition of pagan architecture was still fresh, and much stronger than the influence of Christian church-building art.

Owing to the extreme religious conservatism of the Jews, this type of synagogue, initiated in the fourteenth century, has been used ever since and has produced many wonderful monuments of wooden architecture.

The shape of the roof of the wooden synagogue is very logical in its design, and follows closely the internal shape of the ceiling. There are several types of sixteenth and seventeenth century synagogues, with one, two or even

three balconies. They sometimes have huge roofs, similar to the roofs of Indian or Chinese temples—always like a pyramid, and stretched towards the sky. The other type is longer and with only one balcony.

They were adorned with arcades and rich carvings; and as those synagogues were built mainly in smaller towns the application of the law of the Church was not so strict as it would be in the capital.

The names of the architects and of the builders of the synagogues are often unknown. But the tradition and some half-effaced signatures on the beams have preserved a few names. Jehud Leiba, Hilal Benjamin of Lask were the architects of buildings which, by their well-balanced appearance and by their general outline were similar to the type of Polish manor house or small church. Occasionally they are quite plain outside, and present the aspect of a barn. But the interior is always fascinating with its fantastic, warm coloured polichromia, delicate and abundant carvings, altars that reach the ceiling of the house and are charged with a wealth of baroque chandeliers, decorations and figures. There are

galleries and columns, small sanctuaries and high perched lodges of mysterious purpose. Sometimes the outside of the wooden synagogue is as lavishly decorated as its interior. There are then various small turrets and bridges, sculptures and paintings, all dominated by

the monumental roof, itself broken into an intricate shape with its top upswept into a sharply pointed cap and the lower parts spread over the house like a veil hanging gracefully from the invisible hook of the peak.

#### STONE-BUILT SYNAGOGUES

Stone-built synagogues have been known in Poland since the fourteenth century. There are two principal types—*longitudinal gothic* (Cracow) with two columns upholding the arches, and *square*, with four pillars supporting the so-called *bima* in the centre. The *bima* supports the ceiling, which is divided into nine parts. Which of the two types (wooden or stone-built) was the more ancient is difficult to say, but it would probably be the wooden synagogue, as derived from the pagan "gontyna." In addition to the above two types, there exist also stone-built synagogues copied from the wooden structure, with the characteristic shape of the roof, as an example of transition.

The oldest document of Jewish art in Poland, a tombstone unearthed near Breslau in 1917, and dated 1203, proves the practice of Mosaic faith in that country as early as the thirteenth century. The first synagogues were probably erected about 1237 or 1264 (Kalish). But the oldest did not survive; the one at Lwow was destroyed by fire in 1624 and that of Poznan in 1567. The oldest synagogue now existing is in Kazimierz, the Jewish suburb, or ghetto, of Cracow; it was built in the Romanesque style in the fourteenth century. The next was that of Poznan, demolished in 1908. The chronology of Mosaic religious architecture then makes a jump to the synagogue of Moses Ysserles, or Remu, built in 1553 in Cracow. Then came the synagogues of Gniezno (rebuilt in 1658), and of Lublin (1567), and Maharszálszul, which has been altered, in 1856.

The greatest number of synagogues date from the first half of the seventeenth century.

The artistic influences, both western and eastern, have been diverse. According to the predominance of one of them the building was either oblong or square, with one or two great naves. The synagogue of Cracow, of the

latter type, was built by Jews from Bohemia, on the model of the synagogues of Prague, Regensburg and Worms, which marked the advance of the Jews from the Rhine to the Vistula.

The synagogue of Nachmanowicz in Lwow (1582) was the origin of many other square buildings, based on a concentric conception of the whole plan.

The large synagogues have arches which meet on the four central pillars. Thus the ceiling is divided into nine parts, with the *álmemor* or *bima* in the middle. Such are the synagogues of Lwow (1632), Brody, Lesznow, Rzeszów, Maciejow, Grodek Yagiellonski and many more. In all of them the pillars are powerful, square or octagonal, and only seldom circular in shape.

There is yet another and most original way, of supporting the arches of the roof. Instead of four pillars, there is only one in the centre of the building, composed of four columns very close to each other, and meeting at their top in one huge capital. The *álmemor* is between them, and the *bárában* forms a sort of cover on the *álmemor*. An example of this type is to be found in Lublin. Extra mural synagogues have been built first in Luck, then in Tarnopol, Szarygrod, Szydlowiec, Zolkwia and Lubomla. They all have very high, small windows and all the characteristics of a fortress. They had to be fortified by order of the king, and in consequence the structure of the roof was altered, being sunk and adorned with Polish attics. The law demanded that the synagogue might be at any moment converted into a blockhouse. When there was no longer need for defence, the structure with towers survived by force of habit.

Strong originality and a remarkable simplicity strike us in the frescoes, which deserve a separate study.

#### THE INFLUENCE OF THE JEWISH TRADITION

In order to appreciate the beauty of the synagogues, it is important to have an idea of their surroundings, of the background on which they are designed, and to understand their atmosphere—in a word—to reproduce the familiar neighbourhood of the ghetto, and to see the peculiar life which animates the population of so many towns and villages, a picture of quasi-theatrical power. This picture is displayed more especially in Galicia, Volhynia, Podolia. This fidelity to the laws of the religion, to laws and decrees of the government and to the canons

of the fifteenth–sixteenth centuries is expressed in all the customs of life—in costume, ritual and in music. The traditional feature of the ritual and festive costumes is no longer to be found in Spain or Germany, in the same picturesque and impressive form in which we find it in Poland. All this, together with the architectural forms, creates a general picture of faithfulness to tradition, religion and taste, which preserves, as nowhere else, this peculiar mode of life and the character of the Jewish people.

#### THE NEED FOR RESEARCH AND PRESERVATION

The interest in the monuments of Jewish art in Poland and the research in that field was started scarcely

thirty years ago. The whole of the existing data has therefore not yet been thoroughly classified and de-

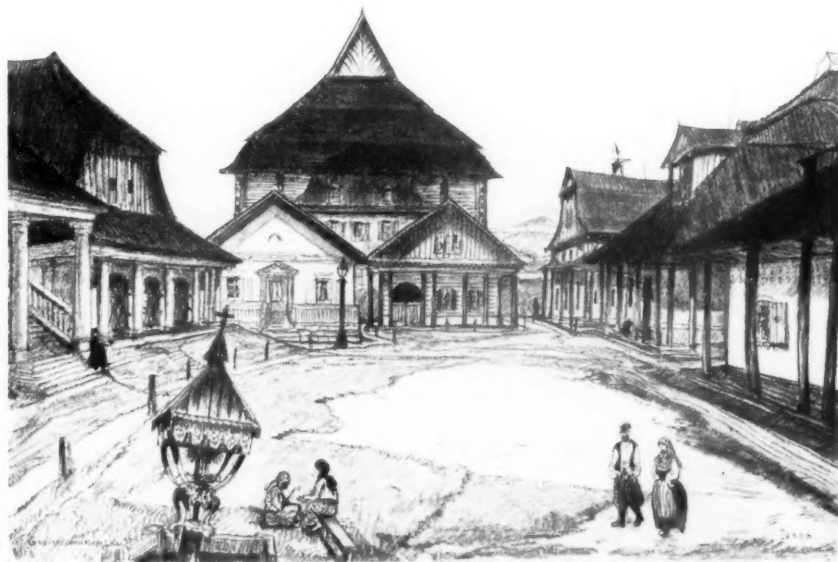
scribed by historians of art. Berson, Kraushar, Glager, Grotte, Mokłowski, Szyszko-Bohusz, Bataban, Szyper, Zajczyk, Sosnowski, Madame Wisznitzer-Bernstein—all have done important work in that direction, but without a systematic survey of the whole, since they were concerned in each case with particular buildings or epochs.

A substantial study of the development of Jewish art will demand an immense effort on the part of the scholars and a great expenditure for excavations, etc. The collection of the "Warsaw Society for the Preservation of Monuments of the Past" in the Baryczka House in Warsaw, contains many valuable specimens of Jewish art; there are also similar collections in the Museum of the Ministry of Education and other museums, but they are far from being complete and lack iconographic material. The wooden synagogues are reaching the limit of their age, the old timber is by now almost completely decayed. The danger of fire, which has already destroyed so many synagogues, is as great as ever. The task of making an inventory and a photographic list of now existing synagogues is therefore urgent. There is no institution that would collect pictures, etchings, photo-

graphs and plans—completing a survey of the whole of the Jewish arts—and a historian of art can hardly be expected himself to collect the whole of the material and information that is necessary for a serious study of the subject. But such is the actual situation. The materials have been collected exclusively by the author at his own expense.

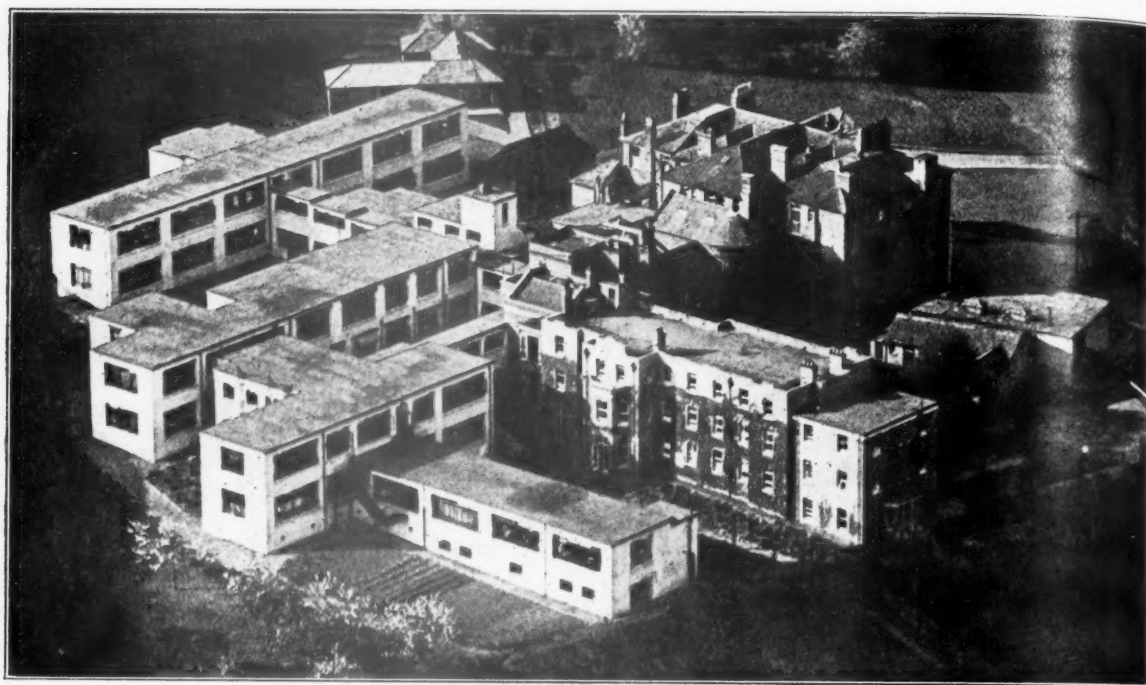
To preserve these works of art is a task for the Government, and for the Jewish people. Their duty is to describe the actual condition of what is left of Jewish architecture, and to preserve what can be preserved. Some of it, together with its sculptures and paintings, has a world wide artistic importance, all the more so since most of this peculiar art is unknown to Europe, with the exception of Poland and Germany. The art of even the most primitive peoples has been already the object of research and study. Several negro and Malayan tribes have had discoverers of their art who have presented the results of their research to the public in beautifully produced volumes.

The Jewish art is one of the last left waiting for such a recognition. We should not let it die in the forgetfulness of all.



SYNAGOGUE AT IANON





*This air view shows clearly the difference in fenestration between the new and old portions*

## HERTFORD COUNTY HOSPITAL EXTENSIONS

*Architects: Elcock and Sutcliffe [FF.]*

The main interest in this building, which is the partial reconstruction and extension of a small general hospital, lies in the use for the first time in England of the "verandah ward."

This new type of ward was described and illustrated in the Chadwick Lecture "Modern Hospital Planning and Construction in Great Britain and Ireland," delivered at the R.I.B.A. by Mr. C. E. Elcock on 15 March 1932, and also in an article by the same author, "The Present Position of Hospital Planning and Construction in Great

Britain and Ireland," published in *Nosokomeion*, No. 4, October, 1931.

### PLANNING OF THE WARDS

The principal feature in the planning of the ward is the placing of the beds parallel with the long walls and in groups separated by steel and glass screens. The windows are in large horizontal units, the greater part of the area being hung sliding and folding so that it can be entirely opened; this makes unnecessary the provision of sun balconies and avoids the movement of beds. In the large 17-bed ward the ratio of glass area to floor area is approximately 1 to 2. The floor area per bed is 94 square feet and the cube 940 cubic feet per bed.

*A unit of two wards, placed east and west. The windows on the north side are reduced to a size sufficient to give cross ventilation*



GROUND FLOOR

These wards contrast with the old type having beds at right angles to the walls, resulting in a span of 24 to 28 feet. The verandah ward has a span of 20 feet, and gives a considerable economy in floor construction.

Each unit is planned so that two or three wards can be supervised from the common ward kitchen, which is fitted with large sheets of plate glass.

Where the wards run east to west small windows sufficient to give cross ventilation only are provided on the north side.

### CONSTRUCTION OF THE WARDS

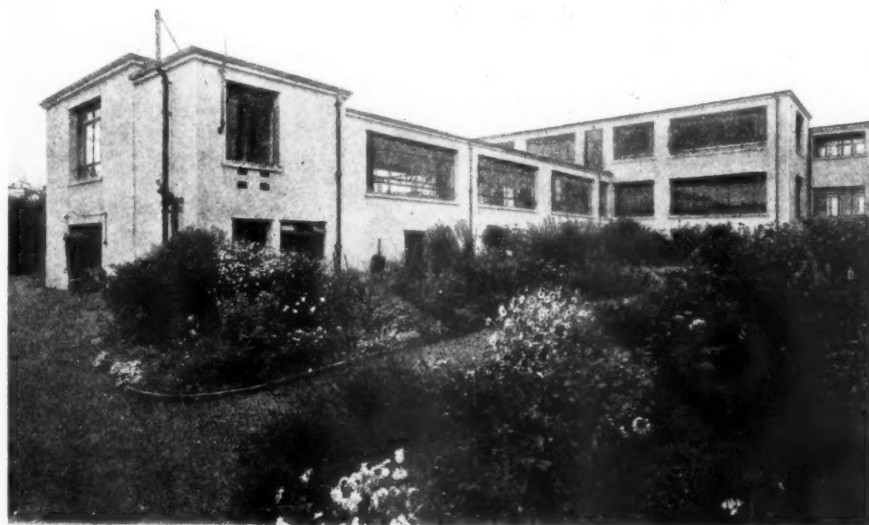
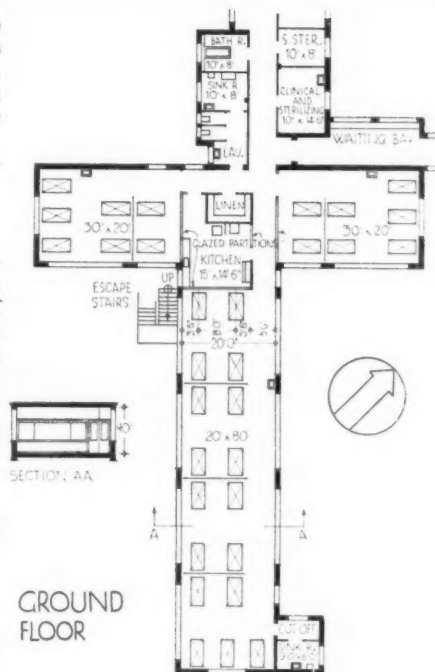
The walls are of 14-inch brickwork covered externally with a white cement (Snowcrete) stucco. The window lintels, floors and flat roofs are of reinforced concrete. The flat roof has an insulation of 3 inches of broken brick lightly rolled and finished with asphalt. Internally a Keene's cement is used for plastering, finished with paint; the floor is of composition "Durabloc" blocks; doors are flush teak. There is a coved composition dado. Unduly strong sunlight can be excluded by large roller blinds fixed at sill level and extending upwards. This also ensures easy removal of dust from the blinds and rollers, and the blinds when pulled partly up give privacy when this is required. Heating is by continuous pipes under the windows all round the ward.

The steel and glass screens carry separate light and wireless points to each bed. Over each bay is a powerful ceiling fitting; low power blue lights at floor level are used as night lights.

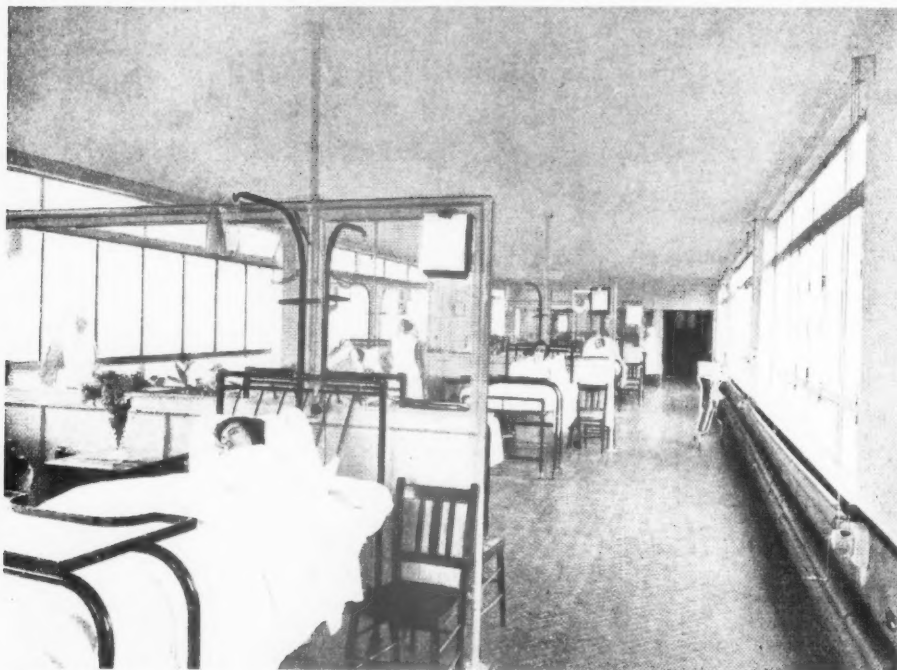
### THE USE OF THE WARDS

This building was finished early in 1933 and experience has therefore been obtained of the wards during a hot summer and a winter.

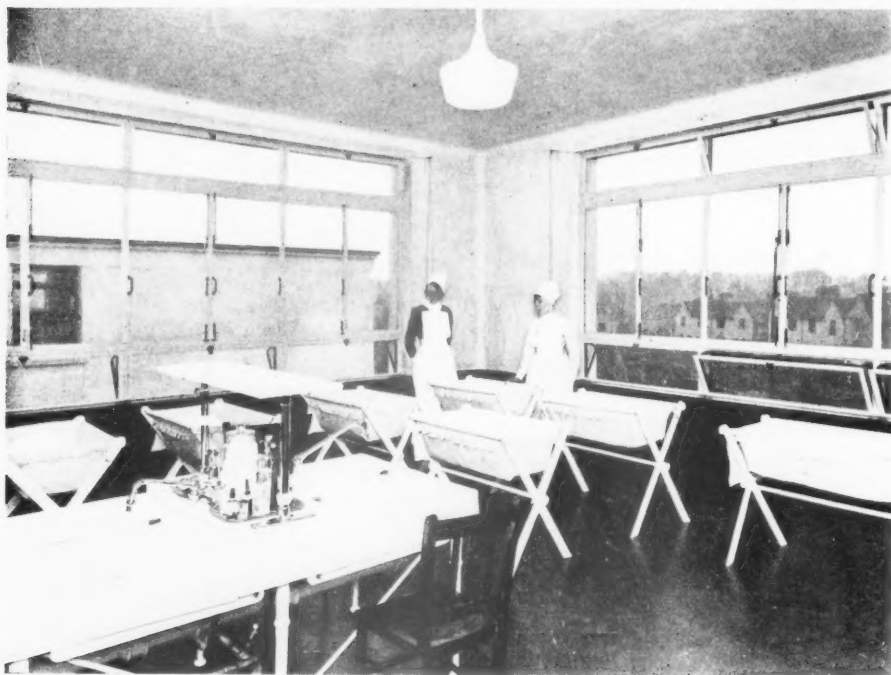
The Secretary has supplied us with the following notes on the experience obtained. The hospital authorities are very satisfied with the wards and regard them as definitely superior to the old type. The principal advantage from their point of view is, however, a psychological one. There is much less disturbance of other patients by one bad patient, by examinations and dress-



Plan and view of the large three-ward unit. The centrally placed ward kitchen permits supervision of all three wards through large plate glass partitions. The ratio of glass area to floor area is 1 to 2. The floor area per bed is 94 square feet and the cube 940 cubic feet per bed.



*A general view of a 17-bed ward. The glass and steel screens are wired for bed lights and wireless.*



*The nursery in the maternity unit. The folding and sliding windows enable air conditions to be obtained.*

ings of individuals and, in general, the degree of privacy is greater. On the whole, also, the ward is more quiet than the old type. The degree of ventilation and its controllability are considered excellent; the unpleasant smell of anaesthetics from operation patients is readily dispersed. Supervision is not quite so easy as with the old type of ward, since the nurses in the kitchen cannot see the faces of those patients whose heads are towards them. One school of thought in nursing, however, holds that the nurses should patrol the wards rather than supervise from a distance. The Secretary suggested that it might be desirable to provide a call-bell service to each bed as is done in private single-bed wards. At present the individual light over each bed is used at night by the patients to call a nurse.

While no exact tests have been made with regard to heating, the winter fuel bill is not felt to be unduly heavy. In the summer no difficulty was experienced in keeping the wards cool on the hottest days.



## THE BUILDING IN GENERAL

The planning of the new sections has been necessarily affected by that of the old, and cannot therefore be regarded as a model. The scheme includes, on the ground floor, a complete new unit of single-bed, three and four bed wards for paying patients, new administrative offices and a new kitchen. On the first floor there is a complete maternity unit of 21 beds with nursery, labour ward and delivery ward. The construction, fenestration and finish of these are similar to that in the large wards. One new operation suite and X-ray diagnosis department have also been provided. The total cost of the scheme was £57,459. The hospital now has 165 beds.

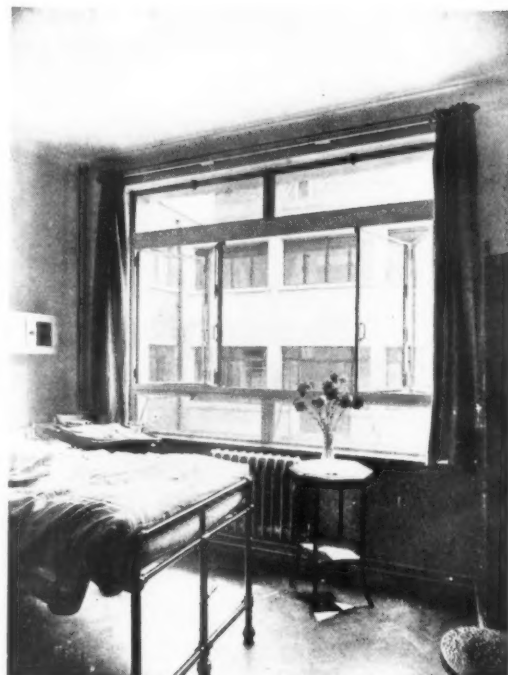
## CONTRACTORS AND SUPPLIERS

**GENERAL CONTRACTORS:** Grace and Marsh, Croydon.

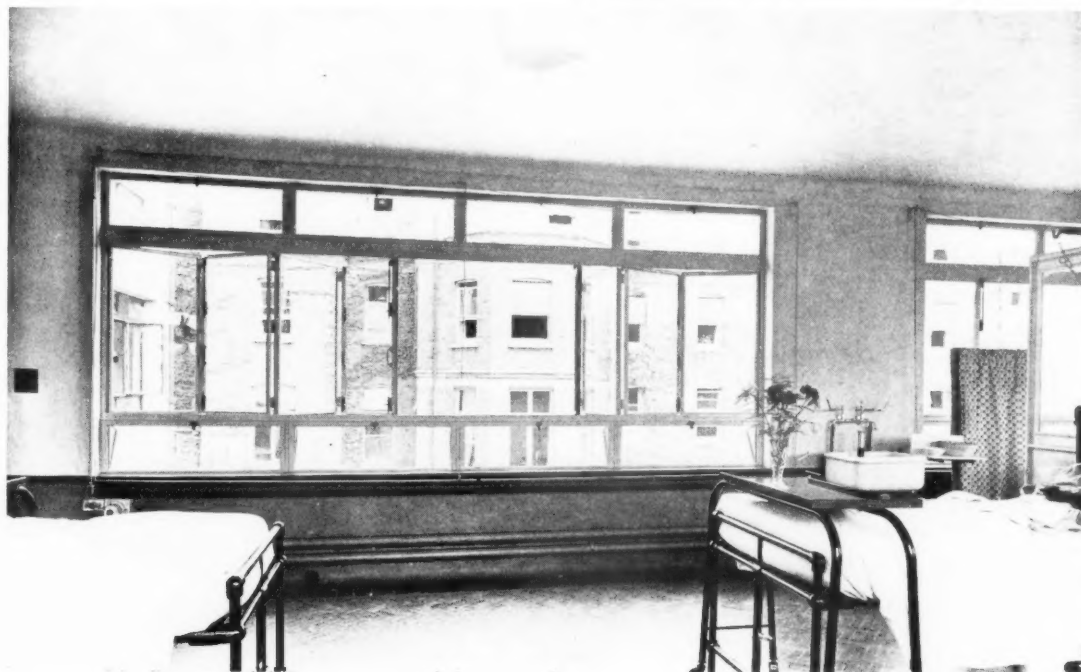
**STRUCTURE:** Reinforced concrete floors and roof. Trussed Concrete Steel Co. Windows, Crittall Manufacturing Co. White cement, Cement Marketing Co. Asphalt, General Asphalt Co. Iron stairs, Haywards, Ltd. Roof glazing, Mellows and Co.

**STRUCTURAL FINISH:** Flush doors, Samuel Elliott and Sons (Reading), Ltd. Wall tiling, Leeds Fireclay Co. Rubber flooring, Macfintops, Ltd. Composition floors and dadoes, Terradura Flooring Co., Ltd. Traps, gullies, etc., Winsor and Co.

**EQUIPMENT:** Blinds, J. Avery and Co. Electrical work, Bell Bros. Heating and ventilating, H. W. Dutton and Co., Ltd. Sanitary fittings, Shanks and Co. Ironmongery and screens, Marley Bros., Ltd. Roller shutters, Shutter Contractors, Ltd.

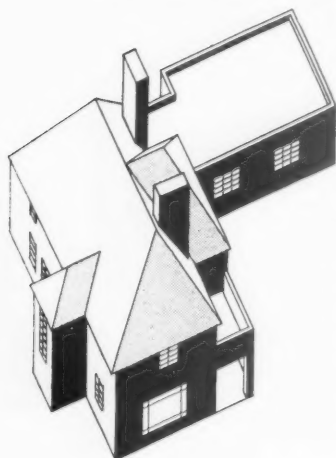


Sliding and folding steel windows in (right) a private ward and (below) a large 17 bed ward. The lower photograph also shows the blind at cill level, with winding gear on the left, and the heating by continuous pipes





A general view of the house from the south-west. The garage is planned to form a screen from east winds and from the drive



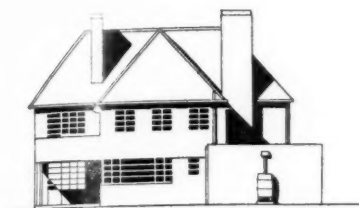
## A HOUSE AT KIDDERMINSTER

Architects: Pritchard, Godwin and Clist [FF.].

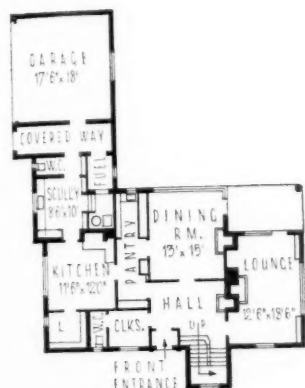
*Site and Plan.*—The house is in a cul-de-sac and has access from the south-east: there is a view to the west and north-west. The drive passes the garage wing, arranged as a screen to cut off east winds, round to the main entrance on the north side. A large plate-glass window in the lounge embraces the view. Communication from both living rooms to the verandah was desired as well as access to flat roofs from the principal bedrooms.

*Construction.*—The walls are of 9 inch brick in two thicknesses, reinforced with expanded metal every 2 feet in height. The external wall is of 2½ inch rustic plum-coloured facing bricks, the interior of 3 inch bricks. The main roof is covered with plain tiles. Windows are of steel fixed direct to brickwork and the doors are flush-panelled, the hall and staircase being panelled to match. Between the pantry and dining room is an electrically heated, insulated, hot-cupboard hatch.

*General.*—The house was designed for a director of a firm of building contractors, Messrs. T. Vale and Sons, Ltd., of Stourport, who built it. The approximate cost was: Main block 30,000 cubic feet at 11d.=£1,375; garage and verandah 10,600 cubic feet at 8d.=£350; total, £1,725.

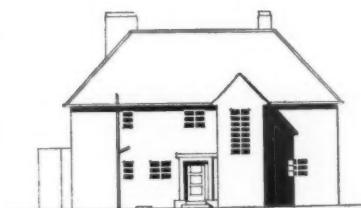


S. E.



On the left is the ground floor plan and on the right the first floor plan. Below is a view of the verandah seen from the garage roof

The brickwork is in stretching bond with snap headers, the walls being built in two  $4\frac{1}{2}$  inch skins bonded with expanded metal strips every two feet in height



N W.



FT 10 0 10 20 30



## Review of Construction and Materials

*This series is compiled from all sources contributing technical information of use to architects. These sources are principally the many research bodies, both official and industrial, individual experts and the R.I.B.A. Science Standing Committee. Every effort is made to ensure that the information given shall be as accurate and authoritative as possible. Questions are invited from readers on matters covered by this section; they should be addressed to the Technical Editor.*

### COPPER PIPE WELDING

Recent advances in the technique of oxy-acetylene welding have made possible its employment at low cost in copper pipe plumbing. It has been successfully and economically used in several recent buildings and in the case of one now under construction, on a very large scale. It has unusual advantages as regards speed in installation.

#### THE USE OF DE-OXIDISED COPPER

In order to make clear why the use of welded copper pipe is an economic proposition in building it is necessary to give some preliminary description of the material and the technique of welding.

The ordinary tough-pitch copper, normally used for engineering purposes, contains a minute percentage of dissolved oxygen in the form of inter-crystalline cuprous oxide. Owing to the risk of this oxygen content combining with the gases of the blow-pipe flame and leaving weakness or porosity in the metal the welding of tough-pitch copper requires special treatment to give satisfactory results.

Welding difficulties may be avoided however by the use of copper which has been de-oxidised by phosphorus or other methods. Copper tubes for household water and sanitary services are now normally made of de-oxidised copper.

#### TYPES OF WELDING

Two types of welding are commonly used, the autogenous weld and the bronze weld. In the former the filler rod is of the same material, namely, de-oxidised copper, as the pipe, but contains about one per cent. in all of phosphorus and silver. These additions are found to make welding easier. In autogenous welding the basic metal is actually fused by the flame. The copper deposit on the weld is in the "as cast" condition and it is desirable to consolidate the crystalline structure of the metal by hammering at a red heat.

In bronze welding filler rods containing small percentages of zinc or tin, or both, are used. Bronze welding requires rather less constant practice or skill than autogenous welding, because the work need only be heated to the melting temperature of the rod, that is from 700 degrees to 1,000 degrees centigrade, the melting point of copper being 1,083 degrees centigrade. The possibility of the work being melted away into holes is therefore much reduced and for awkward positions there is more certainty of making a sound joint. The bronze has also a wider range of working temperature than the copper which tends to be either solid or molten without an intermediate viscous condition. However, on a straightforward seam in copper sheet bronze welding may take more than twice as long as autogenous welding.

Generally speaking it may be said that bronze welding is the more suitable for pipe joints and autogenous welding for the straightforward jointing of sheets.

#### WORKMANSHIP

Any man accustomed to use hand tools with reasonable skill and intelligence can be taught in a week to make welds in

de-oxidised copper pipe. The speed, compared with other methods of jointing pipes (in any material), is extraordinary. Two pieces of 1½ inch copper pipe can be butt jointed by welding in about two minutes on a bench. The average is of course higher on a job where joints may not be so easily accessible.

The light weight of copper pipe, however, often allows units of plumbing, such as ranges of wastes with anti-siphonage pipes, to be made up on the bench and carried to the job. In the large London building previously mentioned one-pipe plumbing is being installed; here all wastes, including soil-pipes, are of copper, the whole arrangement of soil-pipes, wastes from fittings and anti-siphonage pipes being assembled on jigs and welded in the workshop, transported in units to the site and welded in position. The whole of the soil and waste system in this building is therefore of copper throughout, without packed joints of any description or the use of other materials.

Jointing by welding also permits easy alteration of pipe systems. For instance, an extra branch can be taken off a water service by drilling and shaping a hole in the copper main, butting the branch pipe against it and welding the joint. Its use is limited where combustible materials are present owing to the great heat of the blow-pipe flame, though it is possible to do a certain amount of shielding of woodwork by using movable sheets of asbestos.

#### TECHNIQUE OF COPPER PIPE WELDING

The thermal conductivity of copper is very high, about eight times that of steel, and it is therefore necessary to use a larger and softer flame and to move the flame more quickly than when welding steel. The part of the work which surrounds the weld must be pre-heated to give less withdrawal of heat from the area where the blow-pipe flame is operating. The pipes may be joined by a plain butt weld or one pipe may be bell-mouthed slightly to form a channel in which to work the filler. In jointing vertical soil-pipes usually the lower pipe is given a bell mouth.

#### COSTS, ETC.

It is difficult to arrive at accurate representative figures of cost because none have been established under conditions on the job in sufficient numbers to allow of reliable averages being obtained. Those given in the following table are from bench tests (times and costs) and are given for what they are worth. Three typical examples have been chosen namely, a 4 inch (soil) pipe, a 1½ inch (water service) pipe and a ¾ inch (water service) pipe.

Copper Pipe (bronze weld).	4 inch.	1½ inch.	¾ inch.
Time of preparation (minutes) ..	5	3	2
Time of welding (minutes) ..	15	5	3
Cost of material (pence) ..	2½	1	½
Cost of labour (pence) ..	8	4½	2½
Total nett cost (pence) ..	10½	5½	3

If these figures are doubled to allow for overheads, time lost rendering assistance, etc., they will probably be reasonably



representative of job conditions. Even then they are low enough to make clear that welding as a means of jointing copper pipes is likely to become extensively used. The doubled figures are: 4 inch (soil) pipe, 1s. 9d.; 1½ inch (water service) pipe, 11d.; ¾ inch (water service) pipe, 6d.

The weights of copper pipe are of interest particularly as regards ease of handling on the job and the making up of units on the bench. The following figures are taken from the schedule of minimum weights recommended by the Institute of Plumbers. Weights are in lbs. per foot run.

Pipe	Lead	Copper
4 inch	7·5	3·95
2 inch	3·3	1·39
1½ inch	3·0	0·9

## DRYING OF BUILDINGS

*The following article is written in collaboration with the Building Centre.*

Defects in decoration and the shrinkage and cracking of joinery in new buildings are in a large measure due to the insufficient time allowed for drying out during erection. There seems no likelihood in the near future of slowing down building to anything approaching the extent necessary to make an adequate reduction in the moisture content of the structure that will prevent this trouble. At the moment, also, the many schemes for increasing the proportion of work erected dry on the site do not seem to be making great headway.

So far as is known there is no guaranteeing perfect paint-work—at any rate when the finish is to be glossy—on wet plaster. And though most joinery and flooring firms will now supply prepared timber dried to a specified moisture content, there is little use in fixing this in a semi-dry building with a higher moisture content and one that changes from day to day.

It is therefore worth while considering the possibilities of artificial drying.

Artificial drying is now common practice in most Continental countries and in America, but is comparatively rare here. Notable London examples are, however, the Grand Hotel, Charing Cross (1880), the Great Hall of Holborn Town Hall (1879), and Grosvenor House, Park Lane (1926). It has also been used to a large extent in the drying of bank vaults.

### THE PROCESS

Generally speaking the mere application of heat is insufficient to make worth while the employment of special plant though it is, of course, common practice to start the heating installations in large new buildings to assist in drying out plaster. Where, however, the hot combustion gases from coke fires are brought in contact with the plaster and bedding mortars the presence of carbon dioxide (CO<sub>2</sub>) in appreciable quantities ensures the immediate carbonation of the lime and gives them a very real early strength.

The method employed in Germany and England consists of placing outside the building a machine in which are embodied a coke-fired stove and a turbine fan, the latter drawing air over the fire and delivering it through trunks into the building. Windows and external doors are shut and flues and ventilators sealed with sacks and boards.

The drying usually starts after plastering and glazing are complete, but before the joinery "second fixing" (i.e., internal doors, door trim, cupboards, etc.) is carried out. The whole of the woodwork for this is, however, delivered and laid out in the rooms. The fan is capable of maintaining a slight air pressure

## CONCLUSION

Many architects seem still to be unaware that the market price of copper has fallen to a degree that makes it for many building purposes a serious competitor to other metals. The discovery in the last few years of large deposits of copper ore in Rhodesia ensures moreover, a good supply from Empire sources and one enjoying a tariff preference. At the same time the recent advances in welding technique have greatly increased the scope of its use in plumbing work owing to the complete elimination of special fittings such as bends, elbows and tees, combined with the unusual speed at which joints can be made. Particularly on large and intricate plumbing systems its use seems likely to extend.

throughout the building, generally between 1 and 2 inches water gauge. The warm, dry air is forced outwards through the walls and it is actually possible in many cases to see dry patches appear and spread on the outside of the walls during the process.

The heat is carefully controlled. Drying starts at a temperature of 65 degrees Fahr., which is slowly raised to a maximum of 110 degrees. An important part of the process consists in the control of air circulation, which is done by closing and opening windows. The time taken varies according to local conditions, but as a rough guide it can be said that the ordinary three-bedroomed speculative house can be dried in 16 to 24 hours. The extent of drying is tested by driving a bright steel needle into the wall. If when withdrawn the needle has any signs of dampness on it, the process is continued.

## COST AND POSSIBILITIES

Cost varies with the extent and kind of work. On one speculative housing estate where it was possible for a block of ten houses to be done in a group, using two plants, the cost was about £5 10s. per house. The company supply the apparatus,



*Drying plant being used to dry out a pair of small speculative houses*



skilled labour and coke. The contractor supplies rough labour and electric power, the costs of which have to be added to the figure given above. This figure is necessarily approximate and will be much higher for isolated buildings owing to the cost of delivering and setting up the plant. The drying machines weigh as much as  $1\frac{1}{2}$  tons, and the work of getting them into position, often over rough or wet ground, represents a considerable part of the cost. Where a hard road surface has been provided, on which the machines can be manœuvred into position, the influence on the cost and therefore employment of drying may be material.

Doubt has often been expressed as to the possibility of drying out the whole thickness of walls, particularly when these are of dense and impervious materials. Blocks of flats in Germany, by Fritz Höger, built of klinker brick in cement mortar have, however, been successfully treated, as well as some reinforced concrete engineering structures in France.

It is often possible to arrange that the drying process shall not impede other work by being undertaken during week-ends. Alternatively, in a multi-floored building the drying may be carried out floor by floor, following the plasterers. It is also possible in large interiors for the work done by plasterers during the day to be dried at night. In one instance, a cinema interior, painters followed plasterers over a large surface of wall, the work of the latter being dried overnight ready for the former.

The process has the advantages of revealing at once inherent weaknesses in plastering which would otherwise only become obvious after long periods, even as much as twelve months. For instance, a poor key due to insufficient wetting of under-coating or backing will be revealed because the drying process compresses into a few hours the changes in structure which with normal air drying would take many months.

Final decoration can be begun 12 hours after the drying process is completed and there is no risk of joinery shrinkage necessitating expensive making good at the end of the maintenance period. This alone may well offset the cost of drying in addition to avoiding disturbance of the building occupiers after they have taken possession.

"Dreymura" Process, A. Dreyfus, Ltd., Belper Street, London, N.1.)

### SLIDING GLASS DOORS

In the 11 November number 1933 we published an article on sliding glass doors, in which a simple method of arranging frameless glass doors to slide in wood frames was described and illustrated. This consists of grinding the edge of the glass to a rounded form and fixing a slip of whalebone in the bottom of a plough groove in a wooden frame; neat's-foot oil is used as a lubricant.

We have received the following additional information from the Building Centre. It is not usual to fix the whalebone on the soffit groove as well as at the bottom, as a hardwood groove will easily take the slight wear at the head. Neither is it necessary to line the sides of the bottom groove. The strip of whalebone is usually fixed either by dovetailing, screwing or occasionally gluing. Curved work is possible, but difficult and relatively expensive.

The whalebone is supplied in strips from 9 inches to 24 inches in length, drilled and countersunk for screwing into place. It can be supplied bevelled for dovetailing at  $1\frac{1}{2}$ d. per foot extra.

Prices are as follows:—

Thickness in inches	Width in inches	Price per foot run
$\frac{1}{8}$	$\frac{1}{2}$	8d.
$\frac{1}{8}$	$\frac{3}{4}$	9d.
$\frac{1}{8}$	1	10d.
$\frac{1}{8}$	$1\frac{1}{4}$	1 -
$\frac{1}{8}$	$1\frac{3}{4}$	1 2
$\frac{1}{8}$	2	1 3

(Devine and Co., Ltd., St. Stephen's Road, Old Ford, E.3.)

### CRAIGLEITH STONE

It has long been a common belief among architects that Craigleith stone is now unobtainable owing to exhaustion of the quarries. This statement has even appeared in textbooks. We have recently been assured that Messrs. John and James Lawrence, Ltd., 72-74, Eyre Place, Edinburgh 3, are the owners and workers of the original Craigleith quarry and that a stone identical with that produced many years ago is still being quarried and with increasing output. This very fine building stone was the traditional walling material in Edinburgh and neighbourhood for centuries and has a splendid reputation for good weathering qualities; it was also much used for paving and steps for which its resistance to abrasion makes it very suitable. Some of this stone has been recently supplied for a London building. A sample can be seen at the Building Centre.

### PAPER IN BUILDING

Messrs. Jerrard and Co., 15 Dowgate Hill, E.C.4, have pointed out to us that a paper manufactured by them was wrongly described, and the name incorrectly spelt, in our article on Paper in Building published in the 10 February JOURNAL. The correct name is "Creteprufe" and the material is composed of two crepe papers united with a bituminous solution. We regret the error.

### CONTENTS OF PRECEDING NUMBERS

November 11th.—Progress in Research, Bricks, Building Stones, Steel Reinforced Concrete, Timber, B.R.S. Annual Report, Research and clearance, Equipment of buildings, Sliding glass doors.

November 25th.—Weathering of Portland stone, Traffic vibration, Lead pipes in clay, Copper dowels in lead and cement, Condensation, Overhead sliding door gear, Pipe pushing.

December 9th.—The formation of blisters on mastic asphalt roofs, Lifting of wall and floor tiles, Sliding glass doors, Fixing devices and plugs.

December 23rd.—Some notes on Door Springs, Floodlighting, Joining drain pipes with neat cement, Dusting in Concrete Floors, Overhead Sliding Door Gear.

January 13th.—The St. Paul's Foundation Report, Bathing pool surrounds, Electric water heaters and the formation of scale.

January 27th.—The Report of the Reinforced Concrete Structures Committee, Some steel alloys recently introduced, The manhole cover, Tightening wires.

February 10th.—Paper in Building, The D.S.I.R. Annual Report, A Reinforced Concrete Handbook, Reinforced Concrete Practice.

February 24th.—Some notes on Standard Steel Windows, Plaster Failures.

March 10th.—Automatic Firing with Solid Fuel, Steel Windows, Swimming Bath Purification.

March 24th.—The Moplin System of Construction, Compulsory Sound Insulation, Steel Windows.

April 14th.—The Sand-Lime Brick, The Moplin System.

April 28th.—Rural Drainage, The Behaviour of Copper on Exposure to the Elements.

May 19th.—Moving Forms for Reinforced Concrete, The Cost of Hospitals, Public Baths and Wash-houses, Grading of Hardwoods, The Second Steel Structures Report.

## Book Reviews

PROFESSOR FRANK GRANGER'S TRANSLATION OF THE  
*DE ARCHITECTURA* OF VITRUVIUS\*

F. R. HIORNS, F.S.A., F.R.I.B.A.

It was said of Augustus that he found Rome of brick and he left it of marble; that the Field of Mars was, in his time, for the most part unoccupied and he made of it a superb city. To this extent, indeed, he followed the precedent of Athens, some centuries earlier, and set himself to express ambition and culture in terms of architectural magnificence. Suetonius records that he not only built a vast number of public buildings, and thereby secured popularity, but that he exhorted other persons of rank to embellish the city with new buildings, or to repair and improve the old, according to their means. Marcus Agrippa was one of these. He built and repaired aqueducts and a bridge, laid out and drained streets, constructed public baths, temples and porticos, and made his name immortal in the original part of the now famous Pantheon. Many authors of the time, including Varro, Strabo, Seneca and Martial, made reference to the building activities of the early phase of the Empire; and at a later stage, Pliny the Elder (A.D. 70) included in his *Natural History* references to remarkable structures and public works of both Greece and Rome, produced at prodigious cost—so that, as he says, nothing is to be found more worthy of admiration in the whole universe. On so great a theme even the language of exaggeration may be forgiven. But the wonders of ancient Rome are well known to us. Even in the eighteenth century the great draughtsmen of that time, Panini, Bibbieni, Piranesi, Mauro Tesi and others, emphasised the magnificence of their style and character—while, in another way, Gibbon, recounting the contemplative survey of the learned Poggius from the Capitoline Hill, left no room for doubt as to the greatness of Augustan and, later, Roman architecture.

It was immediately preceding, if not actually within, the splendid age of Augustan reconstructions, that Marcus Vitruvius Pollio was working, as an architect, in Rome. He had an intimate knowledge of great works then in hand or already built, from observation or practical concern with their production. In the period of his maturity, following a wide range of practice, he wrote a treatise upon architecture, notable as the only work of its kind that has survived from classic times. Such a general and technical record, by a contemporary observer, relating to constructive and decorative processes applied to Roman architecture could not fail to be of interest to the modern world; to those, indeed, who since the revival of learning have seen in that great phase of building development the precedent and model best suited to the needs of a

later age. It is small wonder, then, that the writings of Vitruvius acquired an almost religious sanctity through the early and mature phases of the Renaissance, and that from then until to-day the cult has never been without its votaries—despite the decline and neglect of this form of scholarship in the last hundred years.

In the interesting introduction to his retranslation of the *De Architectura*, Professor Granger points out that, apart from his official position relative to the public works of Augustus, the author shows a considerable acquaintance with Greek building, and its accessory ornamental or decorative technique, as well as with Hellenic literature. It was, indeed, almost inevitable that this should be so, in view of the recognised dependence of Rome upon the assistance and co-operation of Greek artists and craftsmen, with their long-established and magnificent record in the production of fine buildings, sculpture and painting. As the Vitruvian books, from the references that occur, appear to have been written before Octavian assumed the title of Augustus, it seems appropriate to date them about or somewhat antecedent to 27 B.C.—the year, incidentally, when Agrippa completed the structure that now partly survives in the portico of the Pantheon. Professor Granger has based his translation upon the Harleian manuscript 2767, of the British Museum, the oldest manuscript of Vitruvius, dating probably from the eighth century, and from the Saxon scriptorium of Northumbria in which the Codex Amiatinus was written. Interesting sections of his Introduction deal with the history of the Vitruvian manuscripts, the various early printed editions, the illustrations to the work, and so on. To some of us a great part of the interest and pleasure associated with *De Architectura* will always be centred upon the sixteenth century editions and commentaries, more particularly the Italian, which, while commonly roaming far from the classic authorship, gave us volumes most beautifully illustrated by woodcuts which must be numbered among the chief delights of the architect bibliophile. The Latin or Italian editions include the very early *Veneranda Volumina* of Sulpitius, published in Rome about 1486—the *Junta* of Fra Giocondo of Verona, published in Florence in 1513 and 1522; the magnificent volumes of Cesare Cicerano, of which the original edition came from Como in 1521, and, amongst others, a variation from Perugia in 1536, with the wood illustrations recut and not so finely rendered; Philander variations on the Giocondo and Cicerano editions, Rome, 1544, etc. Similarly we have the works of Serlio, first appearing in 1537 (Venice); L. B. Alberti, 1550 (Florence); Daniel Barbaro, in which Palladio assisted, 1567 (Venice); Andrea Palladio, 1570, etc. (Venice); Giacomo Barozzi da Vignola, 1563, etc. (Venice and Rome), and

\* *Vitruvius on Architecture*. Edited from the Harleian Manuscript 2767, and translated into English by Frank Granger, D. Litt. A.R.I.B.A. Two vols. in the Loeb Classical Library. London: Heinemann. 1931-34. 10s. each volume.

many others that were, in varying degrees, renderings of or commentaries upon Vitruvius—the compilers of which all speak admiringly of him as the master who had revealed and interpreted for them the noble attributes of classical building. The illustrations of some of the earlier of these editions display an originality and fancy that only remotely connects them with the Roman author they purport to interpret, but none of it could we be without, and the licence taken by Ciserano and Barbaro, for example, is a positive delight. Few books of the quality of Ciserano's *Como Vitruvius* of 1521 can have been produced, and those with any doubt of this might well look at the general typography and spacing of the pages, and such wonders of line illustration as appear, in the Perugia edition, on pages 60 (Book 2) and 117 (Theatre plan, Book 5). Ciserano was concerned with Milan Cathedral in the last decade of the fifteenth century and, rather naively, introduced a plan and two sections relating to that church in his Vitruvian commentary. There are a number of well-illustrated German editions, and the Renaissance Architects of France, following the lead of their Italian confrères, were similarly drawn in a partial way into the Vitruvian cult, as the works of Philibert de Lorme (1567–1626), J. Martin (Paris, 1547), Jean Bullant (1564) and Claude Perrault (Paris, 1674, etc.) show; while in English came a number of translations of both the Italian and French editions and commentaries—including such allied works as John Evelyn's rendering of Freart's *Parallel* (1664) with its somewhat pompous dedication to King Charles, "since the great Augustus vouchsafed to patronize a work of this nature which was dedicated to him by Vitruvius." English renderings of Vitruvius are, however, of an indifferent character, though credit must be accorded to Dean Aldrich for his *Elements of Civil Architecture according to Vitruvius and other ancients* and (passing over Wilkins' somewhat dull and ponderous volume) the attractive and carefully compiled translation of Joseph Gwilt (1860), well entitled to commendation for having met the needs of Vitruvians in a period during which their number has seriously declined. It can be said that Vitruvius has more than justified himself in the splendid series of volumes that, in the best period of the Renaissance, were built upon the theories and practice represented in his *De Architectura*.

With the long time that has elapsed since Gwilt's admirable translation was issued, the need for another was apparent. The task that Professor Granger set himself was to provide a complete and accurate rendering from the earliest and, presumably, the most dependable manuscript available—such doubts or obscurities as might attach to which being only possible of reasonable interpretation under the combination of classical scholarship with a practical knowledge of architecture which he possesses. For general convenience, and to suit the circumstances of the Loeb Library, the work is produced in two-volume form. For the same reason, doubtless, and to enable the original and translated forms to be conveniently compared, the Latin and English texts appear side by side on opposite pages. The natural division of five Vitruvian books in each volume, makes the second appreciably the larger of the two—the most useful Introduction, with a bibliography and index of architectural terms being similarly balanced in both volumes and a valuable note on *Vitruvius and the Craftsmen of Rome* added to those in the second. A generous supply of footnotes throughout assist in explaining obscurities of the text, or add information, to both the original and translated forms. This most happy expedient cannot be too highly commended. Professor Granger states that, in his translation, he has sought

to retain vividness and accuracy of the original, and not a smoothness of rendering which would become a more polished style—so that the reader may discern the genial figure of Vitruvius through his utterances. To do so must have been a task of unusual difficulty, having regard to the loose method of writing with which the ancient author has been so generally charged, and which the translator himself agrees to be actually the case. Accuracy in the rendering is above all things called for, even though at the sacrifice of the pleasing fancy that would associate classical authorship with Ciceronian elegance. There is, of course, no very obvious reason for expecting high literary quality in a practical treatise on architecture—or other than "that of the mason's yard and the carpenter's bench," as the editor of this translation puts it. We read with the more interest the Vitruvian dictum that an architect must be a man of letters. As here set out, indeed, the standard of training and the extent of knowledge required of an architect is of a most exacting character—leaving us little claim to an advance in two thousand years—and, as Milizia said, "should cause those to blush who pursue the profession solely for the purpose of profit, and who are guided by no other feeling than interest." Even philosophy we are, very rightly, called upon not to neglect so that, if success comes, we be not arrogant but rather urbane, fair-minded, loyal and without avarice—for "no work can be truly done without good faith and clean hands." The first chapter of the first book might well make us despair of the varied and numerous accomplishments necessary for the right practice of architecture and we seize gratefully upon such Vitruvian concessions as admit that "in so great a variety of things no one can in every case obtain minute perfection"—having regard to the fact that even those who severally possess the qualities of the craftsman do not all succeed in reaching supreme mastery. The first book tells us of what architecture consists—of the choice of sites, and the placing of buildings—the laying out of towns, foundation works, and so on. The second book is primarily about the commoner materials used in building, and the third and fourth books as to the various species of temples, their planning, aspect, and the application and use of the "orders" of architecture and their characteristic ornaments. It was, of course, the purely classic practice represented in these two later chapters that was so much discussed, and varied, in Renaissance times, and that formed the basis of the main work of the sixteenth and seventeenth century commentators. The fifth book deals with civic buildings and their arrangement—and, incidentally, acoustic considerations and expedients to be attended to, more particularly as affecting theatres. The preface of the second book sets out the delicious story of how Dinocrates the architect, "confident in his ideas and his skill," by strategy worthy of more modern times, obtained commissions from Alexander the Great—all of which goes to show that the more things change the more they are the same thing. Professor Granger finishes the five books that form his first volume with a modest seven plates of illustrations.

The second volume contains, in the sixth book, the author's views as to the siting and arrangement of buildings, the importance of proper orientation, proportion and symmetry, the planning of the Roman house and its various parts in detail, and the variations made "for different ranks of society." This book is of special value in making clear the purpose and arrangement of the houses and other buildings of Pompeii. There is, too, a chapter on "stability," with practical advice such as that of relieving "the weight of walling by arches with their voissours . . . for when arches with their voissours are carried outside the beams and lintols, in the first place the

wood relieved of its burden will not sag; in the second place, if it decays in course of time, it will easily be replaced without the labour of shoring up." But the seventh book is probably the most practical and interesting of all. Its preface tells us much about Greek buildings and those who designed and built them. There follow detailed descriptions of the technical processes for treating stucco, the slaking of lime, how to circumvent damp, wall-painting, the use of marble, with quite a lengthy account of the methods by which the colours were obtained and applied to produce the characteristic chromatic treatment of the Greek and Roman decorators. Thus we learn that whortleberries mixed with milk make a fine purple, that "malachite is dear, and those who cannot afford it steep blue dye with the herb that is called weld (mignonette) and obtain a brilliant green." To those of us who are specially interested in the processes of wall-painting—of the kind of which Pompeii furnishes so many examples—the chapter on "stucco" is especially valuable. It explains the technique with care and shows how the various coats of plaster, mixed with sand and powdered marble, are applied, so as not to be subject to cracks or any other fault,—how when the colours are "carefully laid upon the wet plaster (of the last coat) they do not fail but are permanently durable," the lime having been carefully brought to the condition by which it seizes upon the colour pigment and ensures its permanence. The plasterers' polishing tools bring the surface to the quality of marble, so as to show what Vitruvius calls "a glittering splendour of colour." Here we see the source of the "buon fresco" of the Italians—a subject still little understood though of the greatest importance—and, as evidence from a direct observer of classical painting processes, is an illustration of the unique value of the *De Architectura*. The references to fresco painting in the writings of Theophilus, Cennini, Alberti and others, and in Vasari's treatise on "Technique," seem to bear this out. The eighth, ninth and tenth books deal with hydraulics, geometry, the planetary system, mechanics, engines of war, and so on. But these are, perhaps, of relatively little interest to the architect of to-day—though, may be, raising a sympathetic response to the sentiment that "Inventions serve both to protect against danger and to satisfy the needs of safety." Volume two finishes with an index of technical terms, another

on the geographical and historical references, and twelve further illustrations.

It is strange that some, like Dr. Ussing, should have laboured to show that Vitruvius, as an Augustan architect-author, never existed—that others, while not questioning the generally accepted facts relating to his life and authorship, have tended to speak slightly of his value; a distinguished present-day architect-critic, for example, referring to him, somewhat picturesquely, as a "garrulous third-rate writer." But such representatives of these points of view as may be entitled to be heard are few, and Professor Granger is, obviously, not among them. Nor are the great body of modern archaeologists and scholars—Lanciani, Mau, Choisy, J. H. Middleton, Thomas Ashby, Baldwin-Brown, Lethaby, and so on—who readily quote the authority of Vitruvius in support of their theories and researches concerning architectural survivals from or near the age in which he lived and worked. In his valuable book *The Remains of Ancient Rome*, Dr. Middleton's references to him fill nearly two columns of the index. The genuine Vitruvian, indeed, is in no doubt as to the importance of the contemporary record of Roman building practice set out in the *De Architectura*. That Professor Granger has done a great service in producing, in association with the Loeb Library and at a time when badly needed, a reliable and complete edition of that work cannot be questioned; the more so as the new issue is unusually well supplied with supplementary notes and information of an explanatory kind, for the needs of every reader. Such a new edition, at an extremely moderate price, leaves no excuse for its non-appearance upon the bookshelves of every architect.

Of Vitruvius the man, he himself said "Nature gave me not stature, my countenance is uncomely with age, ill-health has taken away my strength; therefore, though I am deserted by these defences, by the help of science and by my writings I shall, I hope, gain approval." He could little have thought that, from fifteen hundred to two thousand years after, his name and writings would secure such general respect and his book so remarkable a place among the bibliographic productions of the modern world. As Milizia said in the case of Vignola, he formed a system and prescribed rules, and architecture is eternally obliged to him.

#### THE MODERN PUBLIC HOUSE\*

SIR JOHN SIKES, K.C.B.

"The Public House," says Sir Edwin Lutyens, in the bright little preface which he contributes to Mr. Basil Oliver's booklet, "represents what should be the hub of our wheel of life, essential to our material need, and second only to the church that represents our spiritual necessity." Architects must feel that the Royal Academy has this year installed a large-scale model of a church as the hub, and a most impressive hub, of their Summer Exhibition, and by an easy association of ideas, Sir Edwin's words induce the fancy that next year a large-scale model of a Modern Public House may be installed in the same central position, as the rightful successor of this year's Modern Cathedral.

Whatever may be thought of this fancy, Mr. Oliver has paved a part of the way towards its fulfilment by bringing together, with a running commentary, a great number and variety of concrete examples, well illustrated by plans and sketches, of the best recent architecture as applied to the building of new public houses and the reconstruction of old ones. Most people know, at least in a vague way, that great advances

have been made in this field in the last 20 years or so, but Mr. Oliver's compilation will be useful in bringing home to all who are interested in the subject the extent and the potentialities of the transformations which are being effected. Transformations of such variety and such magnitude must, it might well be thought, both lead and reflect a changing outlook on the part of the owners (the brewers), the authorities (the licensing magistrates), and the public generally, and, in fact, the existence of this changing and more enlightened outlook is constantly being confirmed on all sides.

On the architectural side (with which he is primarily and mainly concerned), Mr. Oliver draws his examples from Birmingham, Carlisle, Greater London and a few other districts, and in the districts selected he mentions by name a very considerable number of individual public houses, their architects and the brewer-owners who have commissioned them, with warm but discriminating commendation. It would be interesting, but, even if space allowed, it would also be invidious, to follow him through these comparisons; but there is nothing invidious in echoing the special meed of praise which he gives to Mr. Harry Redfern, F.R.I.B.A., the architect to

\* *The Modern Public House*. By Basil Oliver, F.R.I.B.A. 18.



the Government brewery at Carlisle, which, by one of the strange chances of the war, came into the monopolistic control of practically all the public houses in Carlisle, and in the adjacent parts of Cumberland. "Carlisle," Mr. Oliver says, "has become a Mecca for a constant stream of brewers and their architects, as well as for licensing magistrates, temperance reformers and other interested persons," and that the reason for this is architectural, as well as social and political, is evident from his descriptions and illustrations of the charm and distinction of Mr. Redfern's creative work in that district, a work which has now extended over an unbroken period of about 18 years.

The districts and the types of houses which Mr. Oliver has selected serve well to illustrate the diversity both of the requirements which have to be met, and of the methods which are being employed to meet them. He finds opportunities for constructive criticisms on planning, on exterior treatment, on furnishings and decorations (including an admirable chapter on "Signs, Lettering and Advertisements"), on provision for games and on many other matters. He says next to nothing about cellars and kitchens, or about the connection of these essential elements of a public house with the planning of the service counters, but a more important omission is the absence of examples of what the modern public house might be in poor and thickly populated areas where nothing but a strictly local trade can be looked for. But this latter omission is hardly Mr. Oliver's fault. The improved public house, as we know it at present, is springing up rapidly in key positions, both in the towns and along the arterial roads, where it is pretty sure to command a lucrative trade, or even to have the field to itself. But it is still sadly to seek in the poorer industrial districts and in the mean back streets of the larger towns, where survival from an age with different standards are thick on the ground, and the question which of them to sweep away and which of them to transform is difficult and contentious. In such areas, complete rebuilding is rare, and reconditioning and internal rearrangement are generally limited by an all-too-cramped site. It is therefore not surprising that Mr. Oliver's researches, even if he has pursued them into districts of this type, have failed to provide him with models suitable for reproduction.

It is much to be hoped that Mr. Oliver's little book will reach an extended audience. It is not necessary to be an architect in order to enjoy it.

#### ADVISORY PAMPHLETS ON MATERIALS AND DESIGN

HOUSING IN THE PEAK DISTRICT. *C.P.R.E. Peak District Advisory Panel. Sheffield, 1934. 1s.*

THE LAYOUT AND DESIGN OF SMALL HOUSES. *Cardiff Civic Society, 1934.*

SUGGESTIONS FOR THE USE OF BUILDERS. *Norfolk (East Central) Joint Town Planning Committee. Norwich, 1932.*

All over England small groups of earnest and self-sacrificing people are gathered together with a view to saving the beauty of the unspoiled countryside.

These are the advisory panels set up by the C.P.R.E. and the R.I.B.A. They are working quietly and conscientiously. Sometimes with, but alas! sometimes without, the co-operation and help of the local authorities who are in the industrial North inclined to take up an *intransigent* attitude.

The cumulative results of their labours will eventually be enormous, though there may be an immediate present which will tax their patience to the full. In some cases these panels feel that spoken advice is not in itself sufficient, and many of them have issued pamphlets for the guidance of builders and others who may be concerned. That issued by the Peak District Advisory Panel is a model of what such a pamphlet

should be. Starting with a foreword by Mr. G. Dawber, A.R.A., the originator of the C.P.R.E. and the panel system, it deals with such problems as the design of buildings suitable for the Peak District, the buildings that are ruining the district, the siting of buildings, and the right use of materials. One of the most illuminating chapters is that devoted to "Some Cases dealt with by the Panels."

The brochure is well written, wisely argued, and copiously illustrated, and I should like to recommend to all panels who have not yet issued brochures, to study this one before so doing.

The real cause of the trouble is that the people who in the "railway" period were content with the confines of their own particular suburbs are now in the "motor-car" age spreading themselves over ever-widening tracts of country—and where they go they take their villa residences with them—residences which do not as a rule match well with the English countryside.

Now the great majority of the people in this country have to live in an old house or, except those who are lucky enough to live in a Council house, a new house built by the speculative builder—those houses designed by architects are in the grand total almost negligible. When it is considered that during the last 10 years some 100,000 houses a year have been put up by the speculative builder, and when it is further realised that only some 5 per cent. to 10 per cent. of them have been designed by people remotely resembling an architect, the magnitude of the problem may be understood. It is, I believe, the biggest architectural problem the profession has to face because it is these houses that form the architectural taste of a large and very active section of the nation.

Is it possible to imagine that the people who live in these houses (and the majority of the members of our local authorities do live in such houses) can be careless of architectural character in their homes, and yet have some regard for it in their public and commercial buildings? This is why it is that we get such deplorable centres to our towns, new streets built in a manner of mean magnificence, fit counterpart to our shoddy suburbs.

Of late years there has been great complaint of the encroachment of the Borough Surveyor on the province of the Architect. Is it altogether surprising if this is so? If local authorities are composed for the most part of the villa bred, is it at all astonishing that they should prefer the work of their untrained (that is untrained as architects) borough surveyors?

The remedy is in the architects' own hands. By serving on these panels, whether recognised by the local authority or not is perhaps of no great matter, they can so influence public opinion that they can not only save the English countryside but the English town.

Our abhorrence and detestation of the average speculative builder's design (and how bad that design can be may be readily appreciated from the illustrations in the Peak handbook) is apt to lead us into foolish accusations of "jerry-building." Because we so hate its appearance we feel it must be shoddy workmanship whilst as a matter of fact, most of it is quite conscientious work. To me the tragedy of the speculative builder is not his *bad* work but his *good* work—it will last so long! The brochures issued respectively by the Cardiff Civic Society entitled "The layout and design of small houses" and that by the Advisory Panel of Architects to the Norfolk (East Central) Joint Town Planning Committee entitled "Suggestions for the use of Builders," though less ambitious in scope than that issued by the Peak Advisory Committee, nevertheless contain much useful advice and information.

As I have previously said, the good work grows, and it may not be very long before each local authority has its complementary panel of architects with their brochure of advice.

STANLEY C. RAMSEY [F.].



# Accessions to the Library

1933-1934—IX

INCORPORATING NOTES ON RECENT PURCHASES

(These Notes are published without prejudice to a further and more detailed criticism.)

Lists of all books, pamphlets, drawings and photographs presented to, or purchased by, the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists for reference.

Books presented by Publisher or Author marked

R.

Books purchased marked

P.

\*Books of which one copy at least is in the Loan Library.

## ARCHITECTURE

### HISTORY

BALSTON (THOMAS)

John Martin, 1789-1854, illustrator and pamphleteer. [Reprinted by the O.U.P. from the Library, the transactions of the Bibliographical Society, March 1934.]

8½". (Including a bibliography.) London, 1934. Presented by the author.

ATKINSON (T. D.)

A Survey of the street architecture of Winchester.

3¼", 45 pp. and 49 plates. Winchester: Warren & Son, 1934. 2s. 6d. R.

RAISCH (PAUL)

Die Baugeschichte des ehemaligen Reichsstiftes Schussenried. Dissertation . . . von der technischen Hochschule, Stuttgart Juni 1933.]

9", 61 pp. and 16 plates. Schussenried: Württ. 1934. Presented by the Patent Office.

CLAPHAM (A. W.)

\*English Romanesque architecture after the Conquest.

9¼". xvi + 180 pp. Oxford: Clarendon Press, 1934. 30s. R. & P.

### PROFESSIONAL PRACTICE

R.I.B.A.

[Fees.] Scale of Architects' charges for local authorities' and public utility societies' housing work. 10. pam. London, July 1933.

### BUILDING TYPES

CLUTE (EUGENE)

The Practical requirements of modern buildings.

40. 11½". 231 pp. New York: Pencil Points Press, 1928. 15s. 6d. P.

(CIVIL)

RENDSCHMIDT (M.)

Das alte Elbinger Bürgerhaus. (Dissertation . . . technischen Hochschule, Berlin, Juni 1932.)

40. 11¾". 80 pp. and plates. Elbing: Wernichs. 1932. Presented by the Patent Office.

R.I.B.A. SPECIAL COMMITTEE ON COST OF HOSPITALS AND OTHER PUBLIC BUILDINGS

Report of the Special Committee, January 1934.

40. 13". London, 1934. 1s. 6d.

(ECCLESIASTICAL)

THE INCORPORATED CHURCH BUILDING SOCIETY

Annual report for the year 1933.

SCHNEIDER (S. M.)

Kapellen in Württemberg. (Dissertation . . . der technischen Hochschule, Stuttgart, Juni 1933.)

2¼". Würzburg: Triltsch. 1934. Presented by the Patent Office.

REBOLTZ (SIEGFRIED)

Herzog Barnim III. von Pommern und seine kirchenstiftungen. (Dissertation . . . der technischen Hochschule, Berlin, Juli 1933.)

8¼". xii + 107 pp. Würzburg: Triltsch. 1934. Presented by the Patent Office.

PEISE (WILLI)

Märkische Dorfkirchen des 18. Jahrhunderts zwischen Elbe und Oder. (Dissertation . . . der technischen Hochschule, Berlin, Januar 1933.)

8¼". 93 pp. Würzburg: Triltsch. 1933. Presented by the Patent Office.

(EDUCATIONAL)

HAKE (H. M.) Director

The Building of the new wing of the National Portrait Gallery. [In The Museums Journal, organ of the Museum Association, Vol. 34, No. 1, Apl. 1934.]

10". London, 1934. 3s. Presented by the editor of the Museums Journal.

(DOMESTIC)

INTERNATIONAL HOUSING ASSOCIATION

The Social importance of housing now and in the future.

80. Frankfurt. 2s. R.

A copy of the above work has been added to the Loan Library.

GENSEL (WERNER)

Siedlungsprobleme in großstadtrand. (Dissertation . . . der technischen Hochschule zu Berlin, Mai 1933.)

8¼". Würzburg: Triltsch. 1934. Presented by the Patent Office.

QUIGLEY (HUGH) and GOLDIE (ESMAY)

Housing and slum clearance in London.

7½". xi + 227 pp. London: Methuen, 1934. 7s. 6d. R.

TRAQUAIR (RAMSAY) and NEILSON (G. A.)

The House of Simon McLavish. No. 27 St. Jean Baptiste Street, Montreal. McGill University Publications. Series xiii (Art and Architecture). No. 37. [Reprint from Jnl. of the R.A.I.C. November 1933.]

40. pam. 12½". Montreal, 1933. Presented by Professor R. Traquair [F.].

### ALLIED ARTS

PARIS: UNIVERSITÉ DE PARIS: BIBLIOTHÈQUE D'ART ET D'ARCHÉOLOGIE

Répertoire d'art et d'archéologie. Publié sous la direction de Marcel Aubert. Année 1932, fascicule 37.

40. 10¼". 316 pp. Paris: Morancé, 1933. Presented.

GILBERT (CASS)

An Address on the presentation of the president's medal of the National Academy of Design to E. H. Blashfield at . . . New York January 1934. pam. 9½". New York, 1934. Presented by the author.

MARYON (HERBERT)

Modern sculpture, its methods and ideals.

40. 10¾". xx + 259 pp. and 180 plates. London: Pitman, 1933. 30s. R.

WIGGLESWORTH (H. H.)

An Appreciation of the work of Alexander Marshall Mackenzie. [Reprint from the Quarterly Illustrated of the Royal Incorporation of Architects in Scotland.]

pam. 8¼". Edinburgh, 1933. Presented by the author.

### ARCHAEOLOGY

ARCHAEOLOGICAL SURVEY OF INDIA

The Bakshat manuscript. A study in mediæval mathematics. By G. R. Kaye.

New Imperial series, Vol. xliii., pt. 3, 1933. 11s. 6d.

### BUILDING

#### INDUSTRY

ANDREWS (F. B.)

The Mediæval builder and his methods.

9½". 99 pp. Oxford: U.P. 1925. 10s. P.

## CONSTRUCTION

## LONDON COUNTY COUNCIL

London Building Act, 1930. Code of practice for the use of structural steel and other materials . . . approved by the Council February 1932 *etc.* pam. 40. 13½". London: L.C.C. 1933. 6d. P.

## VERRALL (W.)

Plastering. [*Reprint from* W. Verrall, Brickwork, concrete and masonry.] 7½". London: Pitman. [193-]. 2s. P.

## HIBBEN (THOMAS)

The Carpenter's tool chest.

8". 207 pp. London: Routledge. 1933. 5s. P.

## REINFORCED CONCRETE ASSOCIATION

\*Technical paper, no. 1. Moving forms for reinforced concrete construction. By H. H. Broughton.

40. 11". 16 pp. London. 1934. 2s. 6d. R. (2)

## ALLIED SCIENCE

## CHARTERED SURVEYORS' INSTITUTION

The Surveyor. Historical note.

pam. 8". London. [1934.] *Presented by the Institution.*

## PERIODICAL

## THE INDIAN INSTITUTE OF ARCHITECTS JOURNAL-Quarterly

This new publication is now received by the Library.

## TOPOGRAPHY

## DUBLIN, CORPORATION

A Book of Dublin.

8½". 89 pp. Dublin. 1929. 1s. R.

## TOWN AND COUNTRY PLANNING

## MINISTRY OF HEALTH. [TOWN AND COUNTRY PLANNING.]

Town and Country Planning. Model clauses for use in the preparation of schemes. (*Provisional.*)

40. 13½". 103 pp. London: H.M.S.O. 1934.

*Presented by the Ministry of Health.*

## VIRGIL (BIERRAUER)

Budapest város építési problémái [Town planning problems of Budapest]. 40. 12". 62 pp. Budapest: Tér és forma kiadása. 1933.

*Presented by the author.*

## PRESERVATION OF AMENITIES AND GARDENS

## SCAPA SOCIETY

Rural refuse and its disposal. 81". 50 pp. London. 1934. 1s. R.

## CARDIFF CIVIC SOCIETY

The Layout and design of small houses.

pam. 9". Cardiff. [1934.] R.

## NORFOLK (EAST CENTRAL) JOINT TOWN PLANNING COMMITTEE

Suggestions for the use of builders. (*Issued by the Advisory Panel of Architects.*)

pam. 9". [Norwich.] 1932. R.

## C.P.R.E. PEAK DISTRICT ADVISORY PANEL

\*Housing in the Peak district. 9¾". Sheffield. 1934. 1s. R. (2)

## GROMORT (GEORGES)

L'art des jardins.

2 vols. 9". Paris: Vincent, Treal. 1934. P.

## Review of Periodicals

*Within the self-imposed limit of these pages attempt is made in this review to refer to the more important articles in all the Journals received by the library. None of the journals mentioned are in the loan library, but the librarian will be pleased to give information about prices and where each journal can be obtained. Members can have photostat copies of particular articles made from journals in the library.*

## CIVIC BUILDINGS

BOUWKUNDIG WEEKBLAD ARCHITECTURA. 1934. No. 20 and 21. 19 and 26 May.

Competition designs for Gravenhage Town Hall by Luthman, Dudok, Kropholler, Staal, Roosenburg and others, all designs of great interest, particularly the first two.

## HOSPITALS, SANATORIA, ETC.

EDILIZIA MODERNA. Vol VII. No. 12. Jan.-March.

Many good illustrations of the Institute of Medical Pathology, Milan, an important building.

CONSTRUCTION MODERNE. Vol. XLIX. No. 35. 27 May.

The Sanatorium Maritime at Grau-du-Roi (Gard), by Henri Floutier.

## EXHIBITION HALLS

L'ARCHITECTURE (PARIS.) Vol. XLVII. No. 5. 15 May.

Designs for the Palais des Expositions in a competition promoted by the French Steel Utilisation Council (winner Tournon and Chappey); a single vast hall for the Paris Motor Show, *etc.*, with subsidiary offices. The main hall is to be 250 by 450 metres. The designs illustrated are criticised in detail.

ARKITEKTEN (HELSINGFORS). Vol. XXXI. No. 3.

Competition designs for an exhibition hall at Helsinki-Helsingfors, with extracts from assessors' report, some interesting designs and useful data.

MON F. BAUKUNST U. STADTEBAU. Vol. XVIII. No. 5. May.

Two Exhibition halls—one for the Berlin Motor Show, the

other, and more interesting, for the Dünger Industrien (Manure Industry). Both have wide-span trussed-girder timber roofs.

## TRANSPORT BUILDINGS

BAUGILDE (BERLIN). Vol. XVI. No. 9. 10 May.

Plan of a scheme for a "motor station" on a trunk motor road, with connecting roads and ramp crossings to local road.

ARCHITECT AND BUILDING NEWS. Vol. CXXXVIII. No. 8413. 18 May

BUILDING. Vol. IX. No. 5. May.

The Mersey Tunnel and its ventilation buildings (H. T. Rowse [F.], described and illustrated in considerable detail.

## CHURCHES

ARCHITECT AND BUILDING NEWS. Vol. CXXXVIII. No. 8414. 25 May.

The Church of St. George, Brentwood, Essex (Laurence King [A.] and Crowe and Carless [A.A.]). A good characterful modern brick building.

BYGGMASTAREN (STOCKHOLM). 1934. No. 14. 2 May.

Competition designs for a church at Gothenburg. Some extremely interesting schemes, mostly very modern.

## SHOPS AND OFFICES

DESIGN FOR TO-DAY. Vol. II. No. 14. June.

An article on shop-fronts illustrated by a number of examples, good and bad.

## INDUSTRIAL

CHANTIERS. Vol. II. No. 1. March-April.

Special number on factory construction, detailed description of various methods illustrated by completed buildings, with particular reference to the U.S.A.

ARCHITECTURAL FORUM. Vol. LX. No. 5. May.

A large central dairy building, S. Antonio, Texas, distributing 11 000,000 gallons annually.

ARCHITECTS' JOURNAL. Vol. LXXIX. No. 2053. 24 May.

Illustrations and plans of a brewery in the Sarre territory (O. Zollinger).

## SPORTS AND RECREATIONAL BUILDINGS

L'ARCHITECTURE D'AUJOURD'HUI. Vol. V. 4th series. No. 3 April.

A most important reference number on the planning and design of sports buildings, including Stadia, Racecourses, Swimming Baths, Sports Clubs and "le sport dans la Maison." This number fully maintains "l'A. d'h.'s" reputation.

LA CONSTRUCTION MODERNE. No. LXIX. No. 34. 20 May.

Swimming Bath at Lyon, large bath 33 by 12 metres, a small bath 20 by 12 metres. Spectators in galleries, cabins on the floor round the bathing halls.

## INSTITUTIONS AND CLUBS

BYGGE KUNST (Oslo). 1934. April.

"Oddfellow" building, Oslo (Gudolf Blakstad and H. Munthe-Kass). A large modern building for the Oddfellows' headquarters, including an auditorium seating about 1,000, four large meeting rooms with platforms or stages, offices, etc.; on ground floor are shops. A very interesting building.

ARKITEKTEN (HELSINGFORS). Vol. XXXI. No. 3.

A community club at Kotka. Offices, club rooms and hall for 400 persons (Ekelund).

## SCHOOLS AND UNIVERSITIES

CONSTRUCTION MODERNE. Vol. XLIX. No. 33. 13 May.

Modern school at Alefortville (Seine), by G. Gautier. A useful reference.

L'ARCHITECTURE (PARIS). Vol. XLVII. No. 5. 15 May.

The large primary school at Chalons. A "modern" scheme of considerable interest.

ARCHITECTS' JOURNAL. Vol. LXXIX. No. 2053. 24 May.

ARCHITECT AND BUILDING NEWS. Vol. CXXXVIII. No. 3413-4. 18 and 25 May.

The Masonic School for Girls, Rickmansworth (Denman and Son [FF.]).

BAUGILDE (BERLIN). Vol. XVI. No. 9. 10 May.

Competition designs for a large high school.

IRISH ARCHITECT AND BUILDER. Vol. I. No. 1. April.

The first number of this Belfast Journal. The chief article is by R. S. Wilsheere [F.] on the development of the modern school plan.

ARCHITECTURAL FORUM. Vol. LX. No. 5. May.

Calhoun College, Yale. One of John Russell Pope's neo-gothic collegiate buildings planned to resemble in form and organisation the colleges of Oxford and Cambridge with a liberal interpretation of the luxury standard of an English University.

## FARMS

ARCHITECTURAL RECORD. Vol. LXXV. No. 4. April.

Farm Buildings, a valuable reference number with information on general planning of farm houses and associated buildings, equipment and construction.

## DOMESTIC

ARCHITECTS' JOURNAL. Vol. LXXIX. No. 2052. 17 May.

A special number on London housing with articles full of facts and figures of great value.

BYGGMASTAREN. 1934. No. 9. 14 March.

Description and illustrations in two articles of modern cheap reinforced concrete housing in Sweden.

## HOTELS AND INNS

ARKITEKTEN (HELSINGFORS). Vol. XXXI. No. 2.

Designs for a large modern Hotel at Helsingfors, with plans of 3 floors.

ARCHITECTURAL DESIGN AND CONSTRUCTION. Vol. IV. No. 7. May.

The Modern Public House, a special reference article illustrating a number of good examples—but modern public house architecture is not very lively.

## CONSTRUCTION

CHANTIERS. Vol. II. No. 1. March-April.

Short article on copper roofs.

## EQUIPMENT

AMERICAN ARCHITECT. Vol. CXLIV. No. 2623. May.

A useful section on Thermal insulation which tails off into an advertisement of "Reynolds' Metallation"—a "reference advertisement of Reynolds Metals Company" which is good for an advertisement but must not be confused with the more valuable material in the article proper which contains among much else of interest a table showing the heat insulating capacities of a variety of forms of wall and roof construction.

JOURNAL OF THE INSTITUTION OF HEATING AND VENTILATING ENGINEERS. Vol. II. No. 15. May.

Articles on Air Conditioning in Industry with some useful notes on the conditions required in special trades, and on Domestic Hot Water Supply for large buildings.

## LEGAL

BUILDER. Vol. CXLVI. No. 4762. 11 May.

A note by Mr. W. T. Creswell [Hon. A.] on natural water rights—a useful reference.

## GARDENS

MON F. BUNKUNST U. STADTEBAU. Vol. XVIII. No. 5. May.

German gardens illustrated and described in two articles.

PROFILE. Vol. 2. No. 4. April.

A special number on small gardens and flowers.

## GENERAL

ARCHITECTURAL FORUM. Vol. LX. No. 5. May.

Hungary, a special supplement on Hungarian architecture, illustrating a good modern hotel (Czonka and Miskolczy) a "National" swimming bath (Hajós), the Budapest Central Market (von Meunich), a very good building "Tattersall" (sic) Riding School (Paulheim) with a striking concrete vault.

L'ARCHITECTURE VIVANTE. 1933. Winter issue.

"Au revoir à 'l'Architecture Vivante!'" is the heading to the foreword by le Corbusier which we are pleased to find has no direct architectural significance since the au revoir refers only, though unliappily, indeed, to the periodical and not the style of design with which it and le Corbusier are associated. This last number contains excellent photos, details and descriptions of Corbusier's Swiss pavilion in the Paris Cité Universitaire and a house in Algiers with other articles by Badovici, the Editor, on the planning schemes of Algiers and Antwerp.

## Obituary

### CASS GILBERT, HON. CORRESPONDING MEMBER

At the General Meeting on Monday, 28 May, the President paid the following tribute to the late Mr. Cass Gilbert:—"I should like just to say a word with regard to the late Mr. Cass Gilbert. In addition to being a very eminent American architect, he was a man who was dearly loved by all with whom he came in contact. For nearly thirty years he has been an Honorary Corresponding Member of this Institute, and his friendship for the Institute he showed in many ways. I had only two opportunities of meeting Mr. Cass Gilbert, one of them in New York, the other in England, and I remember being struck, when I was in New York, by the kind way in which he received me when I dropped in to his office, unexpectedly and unannounced. He immediately gave up an hour or two of his precious time to showing me drawings and chatting, which I thought was an amazing thing for a very busy man during working hours. It was in August, and I did not expect to find him there at all."

Professor Beresford Pite, who also spoke, said:—"We

had the pleasure of some contact with Mr. Cass Gilbert both during the Educational Conference which the Institute held in 1923, when that gentleman presided over one of the Sessions, and subsequently in New York.

"With regard to his great works as an architect, it is sufficient to say that the high reputation of American architecture which is entertained by us here is, in a large measure, owing to the beauty and the fulness and the character of his work. His character, the warmth of it, the geniality of it, the width of his sympathies in art, is another interesting aspect of the man. But, personally, I think I can cap the illustration which Sir Giles Scott has given. During a short visit to New York he not only hospitably entertained me and other guests, but he also asked me, one afternoon, to meet him at the club at 3 o'clock, and he gave up the whole of the rest of that day to taking a stranger round New York. That act of unselfish kindness on the part of one of the busiest architects of America is characteristic of the warmth of heart of the man, to which we, as brother architects, would like to pay our respect. It is a great loss; we have lost in him one of the great architects of our era."

## Notes

### THE ARCHITECTS' (REGISTRATION) ACT, 1931

#### USE OF THE TERM "REGISTERED" BY ARCHITECTS WHO ARE ALSO SURVEYORS

The attention of members is drawn to the fact that certain architects who are registered under the Architects' (Registration) Act, 1931, are describing themselves as "Registered Architects and Surveyors." This description is considered to be misleading to the public in that it goes to indicate that the person using it is a Registered Surveyor as well as a Registered Architect. It is suggested that the following form of words should be used:—

"Registered Architect, Surveyor."

### VISIT TO THE FOREST PRODUCTS RESEARCH LABORATORY, PRINCES RISBOROUGH

On Thursday, 21 June, members giving previous notice are invited to visit this research station which has been established under the Department of Scientific and Industrial Research for some eight years under the direction of Sir Ralph Pearson, who on retirement has been succeeded by Mr. Robertson. The station covers a considerable area and has a total staff of about 150, a third of whom are technical experts, and carries on a great variety of work upon timbers from all parts of the Empire, including large scale tests on mechanical properties, impregnating experiments, tests on resistance to decay and mycological tests on timber diseases. Some of these are carried

out for government departments such as the post office, others for trade development, others again are matters of pure research.

The station has its own siding off the railway, whence heavy baulks of timber are brought in by truck for conversion at the saw mill or deposit in the large pond. At the mill specimens are cut, graded and marked, and then passed on for test. In the extensive mechanical laboratory modern machines can be seen in operation for crushing, bending, and other physical tests. On the other side of the rail track is the impregnating and seasoning plant, including means for measuring the absorption of creosote and other liquids by timber under pressure.

A "graveyard" has been established in which some thousands of numbered specimens have been placed partly in the ground to ascertain their rates of decay in the natural or treated condition. A feature which should be of special interest to architects, and which was established through R.I.B.A. representation, is the dry rot house, a brick building comprising four rooms on the ground floor, and four, one off the other, in the roof. It has been constructed so that part is well built and part devoid of the usual precautions against damp. The building has a heating plant admitting of the regulation of temperatures. Dry rot is now well developed in the house and its behaviour is being analysed.

In the administrative building are the laboratories for mycological and chemical researches; here something will be learnt about moisture content, which must be appreciated to avoid troubles by movements of floors and joinery. Here also

the inquirer will be introduced to the various beetles which infest timber, and will find that their habits have been studied so deeply that he can even ascertain their attitude towards the use of incense in churches. This building also contains many museum specimens of timbers and fungi.

Among materials, after plaster, timber probably provides the architect with most of his troublesome problems, and those who are able to spare the time will find a visit to the station of value in putting them in touch with what science is doing to solve difficulties which, at times, all must experience.

Princes Risborough is approximately 35 miles by road from Oxford Circus, and cheap return tickets are available on the railway at 4s. 5d. Members wishing to attend are requested to write to the Secretary of the Science Standing Committee, 6 Conduit Street, W.1, as soon as possible, and in any case not later than Thursday, 14 June, when particulars regarding times of trains, etc., will be sent to them. The party will probably leave London soon after noon. ALAN E. MUNBY [F.]

### COUNCIL GUESTS

The Council Guests for the evening of Monday 28 May were: Mr. W. G. Newton, M.C., M.A., F.R.I.B.A.; Sir Henry Pellham, K.C.B., Permanent Secretary the Board of Education; Sir William Rothenstein, M.A.; Mr. Charles R. Finnis, M.A., Clerk of the Merchant Taylors' Company; Mr. George Turner, M.C., The Master of Marlborough College; Mr. Frank Fletcher, Headmaster of Charterhouse School; Mr. John Bell, M.A., High Master of St. Paul's School; Mr. John Russell Pope, P.L.B., M.A., Litt.D., Hon. Corresponding Member; Mr. A. J. Davis, A.R.A., F.R.I.B.A.; and Mr. G. A. Crockett.

The following accepted invitations to be present at the meeting: Mr. G. A. Riding, Headmaster, Aldenham School, and Mrs. Riding; Mr. F. B. Malim, Master of Wellington College; Mr. M. L. Jacks, Headmaster, Mill Hill School, and Mrs. Jacks; The Rev. A. C. Powell, O.B.E., Headmaster, Epsom College; Capt. R. W. Jepson, M.A., Headmaster, Mercers' School, Holborn; Mr. C. M. Cox, M.A., Head-

master, Berkhamsted School; Mr. H. Grose-Hodge, Headmaster of Bedford School, and Mrs. Grose-Hodge; Mr. W. R. Booth, Master, Dulwich College; Mr. W. H. A. Whitworth, M.C., Headmaster, Framlingham College, Suffolk; Mr. H. A. Wootton, B.Sc., Headmaster, Perse School, Cambridge, and Mrs. H. A. Wootton; Miss M. Taylor; Mr. H. L. Price, M.A., Headmaster, Bishop's Stortford College; The Rev. D. G. Loveday, M.A., Headmaster Cranleigh School, Surrey.

### ROME SCHOLARSHIP IN ARCHITECTURE

#### EXHIBITION OF FINAL COMPETITION DESIGNS

The designs submitted in the Final Competition for the Rome Scholarship in Architecture will be on exhibition in the Galleries of the Royal Institute of British Architects, 9 Conduit Street, W.1, between the hours of 10 a.m. and 8 p.m. (Saturdays 10 a.m. and 5 p.m.) from 22 June to 30 June 1934.

The scholarship is provided by the Royal Institute of British Architects, which makes a grant of £750 a year to the British School at Rome. It is awarded by the Faculty of Architecture of the British School at Rome, and is keenly contested annually by the most brilliant students selected from the various Architectural Schools in the country. The scholar is required to go to Rome to study for a period of two or three years at the British School at Rome.

This year the subject of the competition was "A Building for a Permanent Exhibition of Art in Industry." Fourteen students, drawn from the following Schools, took part:—

- The School of Architecture, Edinburgh College of Art.
- The Leeds School of Architecture.
- The Liverpool School of Architecture, University of Liverpool.
- The School of Architecture, The Architectural Association, London.
- The Bartlett School of Architecture, University of London.
- The Royal Academy Architectural School.
- The School of Architecture, University of Manchester.
- The Armstrong College School of Architecture, University of Durham.

## SCHOOL NOTES

### ARCHITECTURAL ASSOCIATION SCHOOL

The following notes have been contributed by a student:—Among this year's measured work by the Third Year were some interesting drawings by P. H. Laurence and K. C. Brown, of a street in Stamford. They form a complete record of a row of eighteenth-century houses, and are valuable as an analysis both of the individual domestic buildings, and also of the street design of the period. The drawings were accompanied by admirable photographs and a written analysis.

Two First Mentions were awarded on the Second Year decoration subject of a Boudoir in the Louis Seize style. The decoration of modern buildings has as yet failed to find any standards of expression, and it is obvious that this cannot be achieved until an accepted precedent can be discovered from which a modern vernacular can be built up. For certain types of decoration it is possible that this precedent may be found in the Louis Seize style which did succeed in attaining a very fine expression of elegance and festivity in decoration. As such the style is well worthy of study.

In the near future the Third and Fourth Years are to do an esquisse for an A.A. Sports Cup. It is to be hoped that the result will be as successful as that of the last esquisse of a similar nature, when R. Y. Goodden's design was selected for the Architects' Golfing Society's Cup. The finished product was one of the rare examples of good design in athletic cups, which were illustrated in a recent issue of *Design for To-Day*.

There has been a marked revival of interest in cricket this term, and the increased number of players have enabled inter-Year matches to be played weekly.

At the first general meeting of the term Lord Balfour talked on slum conditions and rehousing, and a number of photographs illustrating housing schemes in England and on the Continent are on exhibition. In this connection, Mr. Rowse's proposal outlined in the *Evening Standard* for erecting new buildings over the existing roads provides an interesting solution to the problem of housing the tenants during the processes of demolition and re-building.

D. E. P.



## THE LIVERPOOL SCHOOL OF ARCHITECTURE

The past term, with the exception of a preliminary week of festivities, which included "Panto Day," when a student collection is made on behalf of the local hospitals, has been one of great drawing-board activity, and many lectures. Professor Budden's Inaugural Lecture as Roscoe Professor of Architecture was given in the Arts Theatre on 2 March. In the slightly oppressive dignity of full academic surroundings, he put forward an argument which interested his audience acutely whether lay or professional. He traced the winding path of architecture from the Renaissance to the present day, to show the emergence and growth of the real working principle of contemporary building processes, namely, synthesis, the building up and co-ordinating of the many and various parts from within, rather than their manipulation to fit a conception arbitrarily imposed from without. Slides gave pungent illustration to the force of the argument.

Ten days later, Professor Reilly returned to Liverpool to give the Roscoe Lecture of the Literary and Philosophical Society. He delighted a large audience with a paper which he called "The Body of the Town"; and which we hope to print in full in this JOURNAL.

Another lecture, less formal still, was given a week later, by Mr. Clough Williams-Ellis, who came at the invitation of the Society for Cultural Relations with Soviet Russia, to lecture at

the School, on Architecture in the U.S.S.R. After an entertaining talk, an informal discussion ensued, and the question of large scale slum clearance was brought up, Mr. Williams-Ellis remarking that "at present our so-called warfare against slums is more in the nature of a tame mock fight."

A fourth interesting lecture, to a wider audience still, was given on the wireless by Professor Abercrombie on 27 March, under the title of "Wanted—A Free Hand"; some very clear reasons for the need of careful town-planning, treated remarkably fully in the short space of twenty minutes.

In the yearly struggle for a place in the finals of the various R.I.B.A. prizes and scholarships open to students, the Liverpool School has maintained a good average. No less than five candidates have been admitted to the competition for the Rome Scholarship:—Messrs. H. B. Alsopp, A. Bullen, T. Clokey, M. G. Gilling and R. Hartley; while Mr. W. E. Cousins is in the final for the Victory Scholarship, and Mr. A. E. A. Dod for the Tite Prize.

On 11 May, the University of Liverpool is honouring Professor Reilly by conferring on him an honorary LL.D. St. George's Hall will house a large gathering on that occasion, in which the grave and gay, in curious combination, will unite to pay their respects to the great man, each in their own fashion. The School will naturally be proud to see its former head on the platform again, and takes this opportunity to congratulate him on a well-deserved honour.

## Membership Lists

APPLICATIONS FOR MEMBERSHIP  
ELECTION: 2 JULY 1934

In accordance with the terms of Bye-laws 10 and 11 an election of candidates for membership will take place at the Council Meeting to be held on Monday, 2 July 1934. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws, are herewith published for the information of members. Notice of any objection or other communication respecting them must be sent to the Secretary R.I.B.A. not later than Tuesday, 12 June 1934.

## AS FELLOWS (6)

ELKINGTON: GEORGE LEONARD [J. 1905], Norfolk House, 7 Laurence Pountney Hill, E.C.4; 4 Woodborough Road, Putney, S.W.15. Proposed by George Elkington, Henry V. Ashley and Stanley C. Ramsey.

GIBBS: THOMAS HARRY [J. 1902], 121 Victoria Street, Westminster, S.W.: 156 Preston Road, Wembley, Middlesex. Proposed by R. Palmer Baines, Robert Cromie and Peter R. Allison.

SAXON: FREDERICK CHARLES, M.C., P.A.S.I. [J. 1918], Cathedral Chambers, St. Werburgh Street, Chester; Yewgarth, Curzon Park, Chester. Proposed by Professor Patrick Abercrombie, Professor Lionel B. Budden and applying for nomination by the Council under the provisions of Bye-law 3(d).

WRAY: KENNETH FLETCHER [J. 1925], 8 Bank Buildings, Hastings, Sussex; "Tinkers Dell," Telham Hill, near Battle, Sussex. Proposed by Kenneth M. B. Cross, Sydney Tatchell and C. Ernest Elcock.

And the following Licentiates who have passed the qualifying examination:—

LAWRENCE: FREDERIC WILLIAM, 93 Southbourne Road, Bournemouth; Four Winds, Guildhill Road, Bournemouth. Proposed by Wm. Hector Mackenzie, A. Edward Shervy and Henry R. Collins.

SPINK: JOHN WILLIAM, Clarence Chambers, Kingston-on-Thames, Surrey; 73 Cobham Road, Kingston-on-Thames. Proposed by A. Jessop Hardwick, W. H. Ansell and A. Harold Goslett.

## AS ASSOCIATES (17)

BERWICK: KATHLEEN RACHEL HARTLEY, B.Arch.(Lvpl.) [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], Little Shelford Rectory, Cambridge. Proposed by Professor C. H. Reilly, Professor Lionel B. Budden and Edward R. F. Cole.

CAVANAGH: HOWARD ERNEST BERNARD [Passed five years' course at the Architectural Association. Exempted from Final Examination], 49 Saint George's Square, S.W.1. Proposed by Major Harry Barnes, John Grey and Howard Robertson.

CORNU: PAUL EUGENE [Passed five years' course at the Architectural Association. Exempted from Final Examination], 3 Gloucester Gardens, Golders Green, N.W.11. Proposed by Howard Robertson, S. Gordon Jeeves and L. H. Bucknell.

GARRARD: GEORGE EDWARD JAMES WILFRED [Passed five years' course at the Birmingham School of Architecture. Exempted from Final Examination], Dennington, Somerville Road, Sutton Coldfield. Proposed by John B. Surman, George Drysdale, and William T. Benslyn.

HUTCHESON: WILLIAM ROBERT [Passed five years' course at the Architectural Association. Exempted from Final Examination], Annandale, Cross Oak Road, Berkhamsted, Herts. Proposed by Howard Robertson, John Grey and L. H. Bucknell.

JONES: DAVID MORGAN, B.Arch., Dip.C.D. [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], Argo Villa, St. Dogmaels, Cardigan, Wales. Proposed by Professor Lionel B. Budden, Professor Patrick Abercrombie and Percy Thomas.

KEIGHLEY: GILBERT ALEXANDER [Passed five years' course at the Architectural Association. Exempted from Final Examination], The High Hall, Steeton, Keighley, Yorks. Proposed by Godfrey L. Clarke and applying for nomination by the Council under the provisions of Bye-law 3(d).

- MEIRING: ADRIAN LOUW, B.A. (Cape Town), B.Arch. (Lyp.) [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], Highstead Road, Rondebosch, S. Africa. Proposed by Professor Lionel B. Budden, Edward R. F. Cole and applying for nomination by the Council under the provisions of Bye-law 3(d).
- MCNRO: JAMES, Dip.Arch. (Aberdeen) [Passed five years' course at the School of Architecture, Robert Gordon's Colleges, Aberdeen. Exempted from Final Examination], North Bodiechell, Fyvie, Aberdeenshire. Proposed by W. L. Duncan, T. Scott Sutherland and R. Leslie Rollo.
- NAUDÉ: DAVID FRANÇOIS HUGO, B.Arch. (Lyp.) [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], c/o Messrs. Louw and Louw, 501 Santam Buildings, Cape Town. Proposed by Professor Lionel B. Budden, Edward R. F. Cole and applying for nomination by the Council under the provisions of Bye-law 3(d).
- OLDACRES: MISS RUTH MARY [Passed five years' course at the Architectural Association. Exempted from Final Examination], Pyrford House, Woking. Proposed by Howard Robertson, John Grey and Julian R. Leathart.
- PARK-ROSS: IAIN [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], c/o Barclays Bank, 111 St. Martin's Lane, W.C.2. Proposed by Professor Lionel B. Budden, J. J. Joass and S. Gordon Jeeves.
- POWERS: FREDERIC WALTER [Passed the qualifying Examination approved by the Board of Architectural Education of the Institute of South African Architects], 9 Southern Life Buildings, Smith Street, Durban, South Africa. Proposed by Ernest M. Powers, Wallace Paton and G. T. Hurst.
- PRICE: JOHN CECIL BURNETT [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination], 27 Brunswick Square, W.C.1. Proposed by Professor A. E. Richardson, L. Stuart Stanley and Matthew J. Dawson.
- SIDBOTTOM: JOHN GRISEDALE [Passed five years' course at the School of Architecture, Leeds College of Art. Exempted from Final Examination], Flat No. 2, 31 Colville Square, W.11. Proposed by H. V. Lancaster, J. Murray Easton and Captain T. A. Lodge.
- WHILE: GEORGE HUNT [Passed five years' course at the Birmingham School of Architecture. Exempted from Final Examination], The Croft, Mulroy Road, Sutton Coldfield, Warwickshire. Proposed by John B. Surman, J. H. W. Hickton and George Drysdale.
- WILSON: DAVID MARSHALL MILLWOOD [Passed five years' course at the Bartlett School of Architecture, University of London. Exempted from Final Examination], 61 Hamilton Terrace, N.W.8. Proposed by Professor A. E. Richardson, L. Stuart Stanley and Matthew J. Dawson.

#### ELECTION OF STUDENTS R.I.B.A.

- The following were elected as Students R.I.B.A. at the meeting of the Council held on 14 May, 1934.
- BROD: JEAN MOISE, 46 Durham Road, Southchurch, Southend-on-Sea.
- BROWN: ERIC, 644 Huddersfield Road, Dewsbury.
- CADBURY-BROWN: HENRY THOMAS, Ducks Hill Grange, Northwood, Middlesex.
- CHARLES: FREDERICK WILLIAM BOLTON, The Chase, Hoylake, Cheshire.
- DOFFMAN: HAROLD, 82 Broad Street, Hanley, Stoke-on-Trent.
- ELSON: CECIL HENRY, 100 Plasket Road, Upton Park, London, E.13.
- FISCH: ROBERT BRIAN, Mill Road, Whangarei, New Zealand.
- FLECK: HENRY BAXTER, c/o High Commissioner for New Zealand, 415 Strand, London, W.C.2.
- GIBBERD: HARRY, 108, Northfield Road, Kings Norton, Birmingham.
- GOLDEN: GONTRAN ICETON, 34 Cartwright Gardens, London, W.C.1.

- GOVAN: HORACE ARTHUR RENDEL, 5, Queensferry Terrace, Edinburgh.
- GRAY: MAXWELL CAMPLIN, Waiohika, Private Bag, Gisborne, New Zealand.
- HABGOOD: JOHN KENNETH, 25, North Road, Ripon, Yorks.
- HALL: DENIS CLARKE, Upminster Common, Essex.
- HALL: JAMES STANLEY, c/o National Bank of Australasia, Australia House, Strand, London, W.C.2.
- HASTIE: HAMISH PONTON, 30 Glendevon Place, Murrayfield, Edinburgh, 12.
- HIRST: SYDNEY GEORGE, c/o Australia House, Strand, London, W.C.2.
- HOOD: ANDREW STEWART, Purlars Acre, Tranent.
- HOPKINSON: GEOFFREY, 16 Parkgate Road, Chester.
- HUGHES: GEOFFREY MADEN, 77 Old Park Avenue, Enfield.
- KNOOP: GEORGE AUBREY, 148 Kenton Lane, Kenton, Harrow, Middlesex.
- KWAN: WING HONG, The Architectural Association, 34-36, Bedford Square, London, W.C.1.
- McKEE: DAVID LAW: Cloughmore, Burlington Crescent, Rhyl.
- MONTGOMERY: FRANCIS GERARD, Beplands, Sandfield Park, Liverpool, 12.
- NASH: GORDON DOUGLAS, Holme Lodge, Oakleigh Park South, N.20.
- NEWTON: JESSE RONALD, 28 Station Road, Langley Mill, Notts.
- PASCOE: ARNOLD PAUL, c/o New Zealand House, 415 The Strand, London, W.C.2.
- RICHMOND: ETHEL MARY, 37 Beresford Road, Rose Bay, Sydney, Australia.
- RILEY: JAMES EDWIN, 14 Priory Street, York.
- SCOTT: WALTER SCHOMBERG, Broomlands, Kelso, Roxburghshire.
- SHEPPARD: RICHARD HERBERT, 93 Somerville Road, Bristol, 7.
- SHERIDAN-SHEDDEN: JOHN RONALD, 24 Newfoundland Road, Gabalfa, Cardiff.
- SMITH: JACK, 519 Leeds Road, Dewsbury, Yorks.
- THOMSON: MARGARET MCBRIDE NAIRN: "Burnside," Hartwood, Lanarkshire.
- TOMPSON: ALAN REGINALD, 27 Bennett Street, Cremorne, New South Wales, Australia.
- TRUDE: JOHN GERARD, Sherwood Road, Toowong, Brisbane, Queensland, Australia.
- TUCKER: HAR DYAL, Verma Bhawan, Bombay 21, India.
- TUCKER: LESLIE JOHN, "Beechcroft," Wensley Road, Harrogate, Yorks.
- WALES: JAMES HOWARD, Mevell Hall, Gargrave, Nr. Shipton.
- WOLF: ANTHONY PETER, 34 Southgate Road, Potters Bar, Middlesex.

#### R.I.B.A. PROBATIONERS

During the month of April, 1934, the following were registered as Probationers of the Royal Institute:—

- ADLER: CYRIL, 1 Redesdale Street, Chelsea, S.W.3.
- ARMSTRONG: JAMES ROLESON, 73 Oakwood Crescent, Greenford, Middlesex.
- BALL: LESLIE, 56 Station Road, Hugglescote.
- BEILBY: LESLIE GEORGE, "Corner Café," Fulford Road, York.
- BLOOMFIELD: JACK, 56 Turnham Green Terrace, Chiswick, W.4.
- BODENHAM: RAYMOND FRANK, 59 Wolverhampton Road, near Hagley Road West, Birmingham.
- BROWN: REGINALD JOHN, "Poplars," Bank Crescent, Ledbury, Herefordshire.
- BUTLER: REGINALD COTTERELL, Elmhurst, Bradmore Way, Brookmans Park.
- CHAPMAN: KENNETH GEORGE, Fairfield Road, Halesowen, Birmingham.
- CHRISTIE: JAMES, 108 Claughton Road, Birkenhead.
- COGHILL: JOHN LAMONT, Dunrobin, Golspie.
- COLLINS: ARTHUR REGINALD GEORGE, 75 Thrale Road, Streatham.
- COOK: EVAN, 41, Water Lane, Stratford, E.15.
- COWAN: RALPH, 18 Moston Terrace, Edinburgh.
- CULLUM: DENNIS GORDON, 75 Chevening Road, N.W.6.
- EATON: THOMAS ALBERT, 30, East Road, West Ham, E.15.
- FAIRHURST: RICHARD, 20 Southfield Drive, Westthoughton, Bolton.

FLECK: HENRY BAXTER, c/o High Commissioner for New Zealand, 415 Strand, W.C.2.  
 FOOKS: HANS OTTO JACK, 15 Kensington Palace Gardens, W.  
 FRENCH: FREDERICK WILLIAM, 5 Poplar Avenue, Cross Heath, Newcastle, Staffs.  
 GAINSFORD: ALAN PETER, 9 Ailsa Terrace, Tiverton, Devon.  
 GRIFFITHS: MICHAEL HENDERSON, Glan-y-mor, Deganwy, N. Wales.  
 HALL: JAMES STANLEY, c/o National Bank of Australasia, Australia House, Strand, W.C.2.  
 HIRST: SYDNEY GEORGE, c/o Australia House, Strand, W.C.2.  
 HOLLINGWORTH: HARRY, 16 Wellington Street, Oldham, Lancashire.  
 HOULDER: GERALD THOMAS, 143 St. Saviour's Road, Leicester.  
 JARVIS: BERNARD ARTHUR WILLIAM, 113, Hindes Road, Harrow, Middlesex.  
 KNAPPER: CHARLES, Brierley Croft, Lawton Road, Kildgrove, Stoke-on-Trent.  
 LUCK: LESLIE LLEWELLYN, 268 Chichester Road, Copnor, Portsmouth, Hants.  
 MACKERETH: DONALD WALKER, 7 Healey Terrace, Fairfield, near Manchester.  
 MAUDSLEY: JOHN ALAN, "Pinewood," High Bentham, near Lancaster, Lancs.  
 MORRIS: THOMAS ELIAS, 7 The Cedars, North Ormesby, Middlesbrough, Yorkshire.  
 NASH: GORDON DOUGLAS, "Holme Lodge," Oakleigh Park South, Whetstone, N.20.

NEALON: KENNETH, 22 Coombe Road, Croydon, Surrey.  
 OLIVER: WALTER JAMES, Braishfield House, Charlton Road, Andover, Hants.  
 PASCOE: ARNOLD PAUL, c/o New Zealand House, 415 Strand, W.C.2.  
 POEL: STANLEY BACON, "Ottago," The Chase, Romford, Essex.  
 POLLITT: ERIC, 29 Harridge Avenue, The Brushes, Stalybridge, Cheshire.  
 POLLOCK: JACKSON NISBET, Medwyn Bank, Corstorphine, Edinburgh.  
 RALPH: THOMAS CARLYLE, 30 Turner Road, Norwich.  
 SOULSBY: JOHN PETER FREDERICK, 127 Coltman Street, Hull, Yorks.  
 STEEL: GEORGE, "Onitsha," Bhylls Lane, Merry Hill, Wolverhampton.  
 STEER: OLIVER EDWIN, 16 Longlands Park Crescent, Sidcup, Kent.  
 SWEET: FREDERICK SIDNEY JOHN, 45 Richmond Road, Taunton, Somerset.  
 TARBOLTON: NORMAN ERIC, 10 Moorland Road, Edgbaston.  
 THOMASON: WILFRED HENRY, 19 Clare Avenue, Hoole, Chester.  
 TRAVIS: CLIFFORD PARKER, "Hilbre," 204 Dimsdale Parade, Wobstanton, Staffs.  
 TUCKER: HAR DYAL, Verma Bhawan, Bombay, 21, India.  
 WARD: JOHN CHARLES, "Runnymede," 302 Cottingham Road, Hull.  
 WAUGH: ERIC, 9 Free-trade Street, Rochdale, Lancs.  
 WEEKES: SIDNEY, 23 Hawthorne Avenue, Kington Road, Kenton.  
 WHEELER: JOHN MARTIN, "Redcourt," Lee-on-the-Solent, Hants.  
 WREGLESWORTH: GEORGE GUY STEVENS, 57 Wheelton Avenue, Derby.

## Notices

### THE TWELFTH GENERAL MEETING

The Twelfth General Meeting of the Session 1933-34 will be held on Monday, 18 June 1934 at 8 p.m. for the following purposes:—

To read the Minutes of the Eleventh General Meeting held on Monday, 28 May 1934; formally to admit members and students attending for the first time since their election.

To read the report of the Scrutineers appointed to examine the voting papers for the election of the Council and Standing Committees for the Session 1934-35.

### INFORMAL DISCUSSION ON MATTERS OF PROFESSIONAL INTEREST

At the conclusion of the above General Meeting there will be an informal and private discussion on matters of current professional interest or concern. Members are invited to bring up for discussion, with or without notice, subjects of professional interest or difficulty.

### COMPETITIONS

The Council and Competitions Committee wish to remind members and members of Allied Societies that it is their duty to refuse to take part in competitions unless the conditions are in conformity with the R.I.B.A. Regulations for the Conduct of Architectural Competitions and have been approved by the Institute.

While, in the case of small limited private competitions, modifications of the R.I.B.A. Regulations may be approved, it is the duty of members who are asked to take part in a limited competition to notify the Secretary of the R.I.B.A. immediately, submitting particulars of the competition. This requirement now forms part of the Code of Professional Practice, in which it is ruled that a formal invitation to two or more architects to prepare designs in competition for the same project is deemed a limited competition.

### ARCHITECTS' AND SURVEYORS' FEES IN CLAIMS UNDER FIRE INSURANCE POLICIES

The Practice Standing Committee of the R.I.B.A., in conjunction with representatives of the Chartered Surveyors'

Institution, have had under consideration the question of professional fees in connection with reinstatements after fire.

No difficulty arises in connection with a fire in a building in course of erection because the building contract provides for such occurrences. It is in connection with a fire in an existing building that difficulties are likely to arise, owing to the policy being frequently indefinite in its terms. The ordinary insurer of a building in many cases does not realise that, although the services of an architect and a quantity surveyor and sometimes a clerk of works are normally essential to a rebuilding owner, unless he is specifically covered against these fees they do not form part of the Insurance company's liability for payment in the case of partial or complete destruction of the building; and in many cases the insurer is not aware of this until it is too late.

In the interests of both themselves and their clients members are advised to take every possible step to ensure that fees for professional services are specifically covered in fire insurance policies.

### NEW BUILDING MATERIALS AND PREPARATIONS

The Science Standing Committee wish to draw attention to the fact that information in the records of the Building Research Station, Garston, Watford, is freely available to any member of the architectural profession, and suggest that architects would be well advised, when considering the use of new materials and preparations of which they have had no previous experience, to apply to the Director for any information he can impart regarding their properties and application.

### THE NATIONAL ASSOCIATION OF WATER USERS

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46 Cannon Street, London, E.C.4.

## OVERSEAS APPOINTMENTS

When members are contemplating applying for appointments overseas they are recommended to communicate with the Secretary R.I.B.A., who will supply them with any available information respecting conditions of employment, cost of living, climatic conditions, etc.

## THE LICENTIATESHIP OF THE R.I.B.A. AND THE ARCHITECTS (REGISTRATION) ACT

The Council have decided that after 31 December 1933 no applications for admission to membership as Licentiates will be considered unless the candidates' names have been entered on the Register of Registered Architects.

## LEGAL ADVICE FOR MEMBERS OF THE R.I.B.A.

The Practice Standing Committee, with the approval and authority of the Council, have made arrangements with an experienced solicitor whereby members of the R.I.B.A. can obtain legal advice for a very moderate fee on matters which arise in their practice from time to time.

The following arrangements have been made:—

A member desiring advice as to his legal position should in the first instance communicate his enquiry to the Hon. Secretary of the Practice Standing Committee, together with the relative documents. Should the matter raise a question of general interest to the profession the Committee would obtain the opinion and forward it to the member. In other cases the member would be put in communication with the solicitor, who would advise him direct.

In matters of general interest the solicitor's fee would be borne equally by the R.I.B.A. and the member concerned, and in other cases the fee would be borne wholly by the member. The fee would in either case be limited to a fixed amount. The advice would normally be confined to an opinion on the documents, but in cases where an interview between the member and the solicitor would be desirable, this would be arranged without extra fee.

Particulars as to the fee chargeable may be obtained on application to the Secretary, R.I.B.A.

## CESSATION OF MEMBERSHIP

Under the provision of Bye-law 21, the following have ceased to be members of the R.I.B.A.

*As Associate:* William George Lloyd Cheriton.

*As Licentiate:* William Wells.

## Competitions

## BELFAST: SANATORIUM EXTENSION

The Tuberculosis Committee of the Belfast Corporation invite architects who have been resident in Northern Ireland since 1 March 1933, to submit in competition designs for an extension and improvements to the Municipal Sanatorium at Whiteabbey.

Assessor: Mr. R. S. Wilshire [F.].

Premiums: 500, 200 and 100 guineas.

Last day for questions: 28 April 1934.

Last day for receiving designs: 31 July 1934.

## DUDLEY: PROPOSED NEW SCHOOL

The Local Education Authority of Dudley invite architects resident or having an office within a radius of 15 miles of Dudley to submit in competition designs for a new elementary

School to be erected on the Wren's Nest portion of the Priory Estate.

Assessor: Mr. Herbert T. Buckland [F.].

Premiums: £150, £100 and £50.

Last day for questions: 7 May 1934.

Last day for receiving designs: 16 July 1934.

## LUTON: NEW SCHOOL

The Luton Town Council have appointed Mr. J. Alfred Gotch, F.S.A. [F.] to act as assessor in a competition for a new school to be erected at Hart Lane, Luton. Conditions are not yet available.

## OLYMPIA: EXHIBITION STAND

Messrs. Venesta, Ltd., invite architects resident in Great Britain and under the age of 30 on 31 January 1935 to submit in competition designs for an exhibition stand to display Venesta plywoods at the Building Trades Exhibition at Olympia in September 1934.

Jury of Assessors: Mr. H. de C. Hastings, Editor, *The Architects' Journal*; Mr. W. L. Wood, Editor, *The Architect and Building News*; Mr. W. T. Plume, Editor, *The Builder*; Mr. Henry Rutherford; Mr. John Gloag; and an architect nominated by the Editor of *The Architectural Review*.

Premiums: £100 and four of £10 each.

Last day for receiving designs: 23 June 1934.

Conditions of the competition may be obtained, on application, from Messrs. Venesta, Ltd., Vintry House, Queen Street Place, London, E.C.4.

## SLOUGH: NEW COUNCIL OFFICES

The Slough Urban District Council invite architects to submit in competition designs for new Council Offices to be erected at Salt Hill.

Assessor: Mr. H. S. Goodhart-Rendel [F.].

Premiums: £250, £150 and £100.

Last day for questions: 23 April 1934.

Last day for receiving designs: 26 June 1934.

## SWINDON: PROPOSED TOWN HALL EXTENSION

The Town Council of Swindon propose to hold a competition for Extensions to the present Town Hall, and Mr. A. B. Knapp-Fisher [F.] has been appointed by the President of the R.I.B.A. to act as Assessor. Conditions have not yet been drawn up.

## SWINTON AND PENDLEBURY: NEW MUNICIPAL OFFICES

The Swinton and Pendlebury Urban District Council invite architects of British nationality to submit, in competition, designs for new Municipal Offices.

Assessor: Mr. James R. Adamson [F.].

Premiums: £150, £100 and £75.

Last day for questions: 11 June 1934.

Last day for receiving designs: 17 August 1934.

Conditions of the competition may be obtained on application to Mr. William Carter, M.B.E., Clerk to the Council, Council Offices, Swinton, Manchester. Deposit £1 is.

## WOLVERHAMPTON: MUNICIPAL ASSEMBLY HALLS

The Corporation of Wolverhampton invite architects of British nationality, resident in the British Isles, to submit in competition designs for new Municipal Assembly Halls.

Assessor: Mr. C. Cowles-Voysey [F.].

Premiums: £350, £250 and £150.

Last day for questions: 21 May 1934.

Last day for receiving designs: 1 October 1934.



## Members' Column

### NEW PRACTICE

Mr. JOHN C. EDGAR, B.Arch., A.R.I.B.A., has commenced practice at 37 James Street, Oxford Street, W.1, and would be pleased to receive trade catalogues, etc.

### FURNISHED OFFICE TO LET

WELL LIT Architect's Office, facing North, fully fitted up with drawing table, cupboards, etc., electric light, lift, ready for immediate occupation. Rental £55 or near offer. Close to R.I.B.A. Apply Box No. 2,554.

### CHANGE OF ADDRESS

ON the 19th May the firm of A. Gardner and Gardner, McLean transferred its offices from 134 Bath Street, Glasgow, C.2, to No. 6 India Street, Glasgow, C.2 telephone: Glasgow Central 900.

### NEW OFFICE: TRADE CATALOGUES RECEIVED

Mr. A. DOUGLAS CLARE, M.C., A.R.I.B.A., has now opened an office at 44 Bedford Row, Holborn, W.C.1 telephone: Holborn 4168, and will be glad to receive trade catalogues, etc.

### NEW OFFICE

Mr. PHILIP B. HERBERT [L.] has opened an office at 12 Midland Chambers, 11a New Street, Birmingham, where he will be pleased to receive trade catalogues.

## Minutes XIII

### SESSION 1933-1934

At the Eleventh General Meeting of the Session 1933-1934, held on Monday, 28 May 1934, at 8 p.m., Sir Giles Gilbert Scott, R.A., President, in the Chair.

The attendance book was signed by 31 Fellows (including 11 Members of Council), 23 Associates (including 2 Members of Council), 6 Licentiates and a large number of visitors.

The Minutes of the Annual General Meeting, held on 14 May 1934 having been published in the JOURNAL, were taken as read, confirmed and signed as correct.

The Hon. Secretary announced the decease of Cass Gilbert, LL.D., of New York, a Past President of the American Institute of Architects, and elected an Honorary Corresponding Member in 1907; and it was Resolved that the regrets of the Institute for his loss be entered on the Minutes, and that a message of sympathy and condolence be conveyed to his relatives.

The President and Mr. A. Beresford Pite [F.] paid brief tributes to the late Mr. Cass Gilbert.

The Hon. Secretary also announced the decease of—

Thomas Frank Green, elected Associate 1903, Fellow 1920.

Edward George Hines, elected Associate 1925.

John Saunders, elected Licentiate 1911.

and it was Resolved that the regrets of the Institute for their loss be entered on the Minutes, and that a message of sympathy and condolence be conveyed to their relatives.

The following member and students attending for the first time since their election were formally admitted by the President:—

William A. Ford [L.]

J. H. Brooke [Student]

Hugh F. Cochrane ..

Arthur G. Hughes ..

C. E. Margot ..

E. Mitchell ..

Vivyan Salisbury ..

F. A. Weemys ..

The President presented to Mr. G. A. Crockett [Student] the medal awarded to him in the competition between students of the Eco'le des Beaux-Arts, Paris, and students of British Schools of Architecture, and Mr. H. M. Fletcher, M.A. [F.], briefly addressed the meeting

regarding the competition, and thanked Mr. Arthur J. Davis, A.R.A. [F.] for giving the medal.

Professor W. G. Newton, M.C., M.A. [F.], having read a Paper on "The Planning of the Public School," a discussion ensued, and on the motion of Mr. Frank Fletcher, M.A., Headmaster of Charterhouse, seconded by Mr. John Bell, M.A., High Master of St. Paul's School, a vote of thanks was passed to Professor Newton by acclamation, and was briefly responded to.

The proceedings closed at 10 p.m.

## Architects' Benevolent Society

### PENSION AND FAMILY PROVISION SCHEME FOR ARCHITECTS

The provision of an adequate pension when working days are over has been a matter of grave concern to the professional man since interest rates on gilt-edged and other safe stocks have fallen with no immediate prospect of recovery. There was a time when a few thousand pounds meant comfort, but those days have gone, and the scheme of pension and family insurance outlined below makes its appearance at a most opportune moment.

The scheme has been formulated by the Insurance Committee of the Architects' Benevolent Society and is available to all members of the R.I.B.A. and its Allied and Associated Societies. An adequate pension can be secured, fixed in amount, and in every way guaranteed, together with the benefit of a widow's pension, payable for life and similarly guaranteed, if the member does not reach retirement age.

The scheme is designed on the broadest lines and the member without dependants may take advantage of the pension benefit alone or the pension can be commuted for a cash sum if desired.

### BENEFITS UNDER THE SCHEME

The benefits under the scheme include:—

(1) A Member's Pension, which may be effected for units of £50 per annum, payable monthly and commencing on attainment of the anniversary of entry nearest to age 65. This pension is guaranteed over a minimum period of five years and payable thereafter for the remainder of life.

(2) The Beneficiary's Pension, payable as from the anniversary mentioned in Benefit No. 1, but to the widow (or other nominated beneficiary) if the member dies before age 65. The amount of this pension is adjusted in accordance with the disparity between the ages of the member and his wife.

(3) Family Provision. Under this benefit a payment of £50 yearly is made to the dependant from the date of death of the member prior to age 65 until attainment of the anniversary previously mentioned, after which Benefit No. 2 becomes available.

Provision can be made for any number of units (of £50 per annum) up to a maximum of £500 per annum.

By adopting a scheme which is limited to members of the architectural profession, the Committee has been able to secure more advantageous terms than would be obtainable by members individually.

Members are entitled to claim rebate of Income Tax on their periodical contributions to the scheme both in respect of pension and of family provision benefit.

A leaflet is enclosed with this number of the JOURNAL and full particulars of the scheme will be sent on application to the Secretary, A.B.S. Insurance Department, 9 Conduit Street, W.1.

### R.I.B.A. JOURNAL

DATES OF PUBLICATION.—1934.—23 June; 7, 21 July; 11 August; 8 September; 13 October.



1934

Davis,

Paper  
and on  
charter-  
Paul's  
clama-

ty  
FOR

g days  
ssional  
ks have  
was a  
t those  
insur-  
ortune

Com-  
able to  
ociated  
mount,  
fit of a  
teed, if

nd the  
ne pen-  
a cash

s of £50  
ainment  
ension is  
payable

iversary  
nomin-  
65. The  
the dis-

o yearly  
member  
reviously  
e.  
£50 per

s of the  
o secure  
ble by

on their  
spect of

JOURNAL  
lication  
Conduit

August;